**The Extermination of the American Bison eBook**

**The Extermination of the American Bison by William Temple Hornaday**

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**PREFATORY NOTE.**

It is hoped that the following historical account of the discovery, partial utilization, and almost complete extermination of the great American bison may serve to cause the public to fully realize the folly of allowing all our most valuable and interesting American mammals to be wantonly destroyed in the same manner.  The wild buffalo is practically gone forever, and in a few more years, when the whitened bones of the last bleaching skeleton shall have been picked up and shipped East for commercial uses, nothing will remain of him save his old, well-worn trails along the water-courses, a few museum specimens, and regret for his fate.  If his untimely end fails even to point a moral that shall benefit the surviving species of mammals *which are now being slaughtered in like manner*, it will be sad indeed.

Although *Bison americanus* is a true bison, according to scientific classification, and not a buffalo, the fact that more than sixty millions of people in this country unite in calling him a “buffalo,” and know him by no other name, renders it quite unnecessary for me to apologize for following, in part, a harmless custom which has now become so universal that all the naturalists in the world could not change it if they would.

W. T. H.

*The* *extermination* *of* *the* *American* *bison*,

By *William* T. *Hornaday*,

*Superintendent of the National Zoological Park.*

**PART I.—­LIFE HISTORY OF THE BISON.**

**I. DISCOVERY OF THE SPECIES.**

The discovery of the American bison, as first made by Europeans, occurred in the menagerie of a heathen king.

In the year 1521, when Cortez reached Anahuac, the American bison was seen for the first time by civilized Europeans, if we may be permitted to thus characterize the horde of blood thirsty plunder seekers who fought their way to the Aztec capital.  With a degree of enterprise that marked him as an enlightened monarch, Montezuma maintained, for the instruction of his people, a well-appointed menagerie, of which the historian De Solis wrote as follows (1724):

“In the second Square of the same House were the Wild Beasts, which were either presents to Montezuma, or taken by his Hunters, in strong Cages of Timber, rang’d in good Order, and under Cover:  Lions, Tygers, Bears, and all others of the savage Kind which New-Spain produced; among which the greatest Rarity was the Mexican Bull; a wonderful composition of divers Animals.  It has crooked Shoulders, with a Bunch on its Back like a Camel; its Flanks dry, its Tail large, and its Neck cover’d with Hair like a Lion.  It is cloven footed, its Head armed like that of a Bull, which it resembles in Fierceness, with no less strength and Agility.”

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Thus was the first seen buffalo described.  The nearest locality from whence it could have come was the State of Coahuila, in northern Mexico, between 400 and 500 miles away, and at that time vehicles were unknown to the Aztecs.  But for the destruction of the whole mass of the written literature of the Aztecs by the priests of the Spanish Conquest, we might now be reveling in historical accounts of the bison which would make the oldest of our present records seem of comparatively recent date.

Nine years after the event referred to above, or in 1530, another Spanish explorer, Alvar Nuñez Cabeza, afterwards called Cabeza de Vaca—­or, in other words “Cattle Cabeza,” the prototype of our own distinguished “Buffalo Bill”—­was wrecked on the Gulf coast, west of the delta of the Mississippi, from whence he wandered westward through what is now the State of Texas.  In southeastern Texas he discovered the American bison on his native heath.  So far as can be ascertained, this was the earliest discovery of the bison in a wild state, and the description of the species as recorded by the explorer is of historical interest.  It is brief and superficial.  The unfortunate explorer took very little interest in animated nature, except as it contributed to the sum of his daily food, which was then the all-important subject of his thoughts.  He almost starved.  This is all he has to say:[1]

[Note 1:  Davis’ Spanish Conquest of New Mexico. 1869.  P. 67.]

“Cattle come as far as this.  I have seen them three times, and eaten of their meat.  I think they are about the size of those in Spain.  They have small horns like those of Morocco, and the hair long and flocky, like that of the merino.  Some are light brown (*pardillas*) and others black.  To my judgment the flesh is finer and sweeter than that of this country [Spain].  The Indians make blankets of those that are not full grown, and of the larger they make shoes and bucklers.  They come as far as the sea-coast of Florida [now Texas], and in a direction from the north, and range over a district of more than 400 leagues.  In the whole extent of plain over which they roam, the people who live bordering upon it descend and kill them for food, and thus a great many skins are scattered throughout the country.”

Coronado was the next explorer who penetrated the country of the buffalo, which he accomplished from the west, by way of Arizona and New Mexico.  He crossed the southern part of the “Pan-handle” of Texas, to the edge of what is now the Indian Territory, and returned through the same region.  It was in the year 1542 that he reached the buffalo country, and traversed the plains that were “full of crooke-backed oxen, as the mountaine Serena in Spaine is of sheepe.”  This is the description of the animal as recorded by one of his followers, Castañeda, and translated by W. W. Davis:[2]

[Note 2:  The Spanish Conquest of New Mexico.  Davis. 1869.  Pp. 206-7.]

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“The first time we encountered the buffalo, all the horses took to flight on seeing them, for they are horrible to the sight.

“They have a broad and short face, eyes two palms from each other, and projecting in such a manner sideways that they can see a pursuer.  Their beard is like that of goats, and so long that it drags the ground when they lower the head.  They have, on the anterior portion of the body, a frizzled hair like sheep’s wool; it is very fine upon the croup, and sleek like a lion’s mane.  Their horns are very short and thick, and can scarcely be seen through the hair.  They always change their hair in May, and at this season they really resemble lions.  To make it drop more quickly, for they change it as adders do their skins, they roll among the brush-wood which they find in the ravines.

“Their tail is very short, and terminates in a great tuft.  When they run they carry it in the air like scorpions.  When quite young they are tawny, and resemble our calves; but as age increases they change color and form.

“Another thing which struck us was that all the old buffaloes that we killed had the left ear cloven, while it was entire in the young; we could never discover the reason of this.

“Their wool is so fine that handsome clothes would certainly be made of it, but it can not be dyed for it is tawny red.  We were much surprised at sometimes meeting innumerable herds of bulls without a single cow, and other herds of cows without bulls.”

Neither De Soto, Ponce de Leon, Vasquez de Ayllon, nor Pamphilo de Narvaez ever saw a buffalo, for the reason that all their explorations were made south of what was then the habitat of that animal.  At the time De Soto made his great exploration from Florida northwestward to the Mississippi and into Arkansas (1539-’41) he did indeed pass through country in northern Mississippi and Louisiana that was afterward inhabited by the buffalo, but at that time not one was to be found there.  Some of his soldiers, however, who were sent into the northern part of Arkansas, reported having seen buffalo skins in the possession of the Indians, and were told that live buffaloes were to be found 5 or 6 leagues north of their farthest point.

The earliest discovery of the bison in Eastern North America, or indeed anywhere north of Coronado’s route, was made somewhere near Washington, District of Columbia, in 1612, by an English navigator named Samuel Argoll,[3] and narrated as follows:

“As soon as I had unladen this corne, I set my men to the felling of Timber, for the building of a Frigat, which I had left half finished at Point Comfort, the 19. of March:  and returned myself with the ship into Pembrook [Potomac] River, and so discovered to the head of it, which is about 65 leagues into the Land, and navigable for any ship.  And then marching into the Countrie, I found great store of Cattle as big as Kine, of which the Indians that were my guides killed a couple, which we found to be very good and wholesome meate, and are very easie to be killed, in regard they are heavy, slow, and not so wild as other beasts of the wildernesse.”

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[Note 3:  Purchas:  His Pilgrimes. (1625.) Vol.  IV, p. 1765.  “A letter of Sir Samuel Argoll touching his Voyage to Virginia, and actions there.  Written to Master Nicholas Hawes, June, 1613.”]

It is to be regretted that the narrative of the explorer affords no clew to the precise locality of this interesting discovery, but since it is doubtful that the mariner journeyed very far on foot from the head of navigation of the Potomac, it seems highly probable that the first American bison seen by Europeans, other than the Spaniards, was found within 15 miles, or even less, of the capital of the United States, and possibly within the District of Columbia itself.

The first meeting of the white man with the buffalo on the northern boundary of that animal’s habitat occurred in 1679, when Father Hennepin ascended the St. Lawrence to the great lakes, and finally penetrated the great wilderness as far as western Illinois.

The next meeting with the buffalo on the Atlantic slope was in October, 1729, by a party of surveyors under Col.  William Byrd, who were engaged in surveying the boundary between North Carolina and Virginia.

As the party journeyed up from the coast, marking the line which now constitutes the interstate boundary, three buffaloes were seen on Sugar-Tree Creek, but none of them were killed.

On the return journey, in November, a bull buffalo was killed on Sugar-Tree Creek, which is in Halifax County, Virginia, within 5 miles of Big Buffalo Creek; longitude 78° 40’ W., and 155 miles from the coast.[4] “It was found all alone, tho’ Buffaloes Seldom are.”  The meat is spoken of as “a Rarity,” not met at all on the expedition up.  The animal was found in thick woods, which were thus feelingly described:  “The woods were thick great Part of this Day’s Journey, so that we were forced to scuffle hard to advance 7 miles, being equal in fatigue to double that distance of Clear and Open Ground.”  One of the creeks which the party crossed was christened Buffalo Creek, and “so named from the frequent tokens we discovered of that American Behemoth.”

[Note 4:  Westover Manuscript.  Col.  William Byrd.  Vol.  I, p. 178.]

In October, 1733, on another surveying expedition, Colonel Byrd’s party had the good fortune to kill another buffalo near Sugar-Tree Creek, which incident is thus described:[5]

[Note 5:  Vol.  II, pp. 24, 25.]

“We pursued our journey thro’ uneven and perplext woods, and in the thickest of them had the Fortune to knock down a Young Buffalo 2 years old.  Providence threw this vast animal in our way very Seasonably, just as our provisions began to fail us.  And it was the more welcome, too, because it was change of dyet, which of all Varietys, next to that of Bed-fellows, is the most agreeable.  We had lived upon Venison and Bear till our stomachs loath’d them almost as much as the Hebrews of old did their Quails.  Our Butchers were so unhandy at their Business that we grew very lank before we cou’d get our Dinner.  But when it came, we found it equal in goodness to the best Beef.  They made it the longer because they kept Sucking the Water out of the Guts in imitation of the Catauba Indians, upon the belief that it is a great Cordial, and will even make them drunk, or at least very Gay.”

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A little later a solitary bull buffalo was found, *but spared*,[6] the earliest instance of the kind on record, and which had few successors to keep it company.

[Note 6:  *Ib.*, p. 28.]

**II.  GEOGRAPHICAL DISTRIBUTION.**

The range of the American bison extended over about one-third of the entire continent of North America.  Starting almost at tide-water on the Atlantic coast, it extended westward through a vast tract of dense forest, across the Alleghany Mountain system to the prairies along the Mississippi, and southward to the Delta of that great stream.  Although the great plains country of the West was the natural home of the species, where it flourished most abundantly, it also wandered south across Texas to the burning plains of northeastern Mexico, westward across the Rocky Mountains into New Mexico, Utah, and Idaho, and northward across a vast treeless waste to the bleak and inhospitable shores of the Great Slave Lake itself.  It is more than probable that had the bison remained unmolested by man and uninfluenced by him, he would eventually have crossed the Sierra Nevadas and the Coast Range and taken up his abode in the fertile valleys of the Pacific slope.

Had the bison remained for a few more centuries in undisturbed possession of his range, and with liberty to roam at will over the North American continent, it is almost certain that several distinctly recognizable varieties would have been produced.  The buffalo of the hot regions in the extreme south would have become a short-haired animal like the gaur of India and the African buffalo.  The individuals inhabiting the extreme north, in the vicinity of Great Slave Lake, for example, would have developed still longer hair, and taken on more of the dense hairyness of the musk ox.  In the “wood” or “mountain buffalo” we already have a distinct foreshadowing of the changes which would have taken place in the individuals which made their permanent residence upon rugged mountains.

It would be an easy matter to fill a volume with facts relating to the geographical distribution of *Bison americanus* and the dates of its occurrence and disappearance in the multitude of different localities embraced within the immense area it once inhabited.  The capricious shiftings of certain sections of the great herds, whereby large areas which for many years had been utterly unvisited by buffaloes suddenly became overrun by them, could be followed up indefinitely, but to little purpose.  In order to avoid wearying the reader with a mass of dates and references, the map accompanying this paper has been prepared to show at a glance the approximate dates at which the bison finally disappeared from the various sections of its habitat.  In some cases the date given is coincident with the death of the last buffalo known to have been killed in a given State or Territory; in others, where records are meager, the date given is the nearest

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approximation, based on existing records.  In the preparation of this map I have drawn liberally from Mr. J. A. Allen’s admirable monograph of “The American Bison,” in which the author has brought together, with great labor and invariable accuracy, a vast amount of historical data bearing upon this subject.  In this connection I take great pleasure in acknowledging my indebtedness to Professor Allen’s work.

While it is inexpedient to include here all the facts that might be recorded with reference to the discovery, existence, and ultimate extinction of the bison in the various portions of its former habitat, it is yet worth while to sketch briefly the extreme limits of its range.  In doing this, our starting point will be the Atlantic slope east of the Alleghanies, and the reader will do well to refer to the large map.

*District* *of* *Columbia*.—­There is no indisputable evidence that the bison ever inhabited this precise locality, but it is probable that it did.  In 1612 Captain Argoll sailed up the “Pembrook River” to the head of navigation (Mr. Allen believes this was the James River, and not the Potomac) and marched inland a few miles, where he discovered buffaloes, some of which were killed by his Indian guides.  If this river was the Potomac, and most authorities believe that it was, the buffaloes seen by Captain Argoll might easily have been in what is now the District of Columbia.

Admitting the existence of a reasonable doubt as to the identity of the Pembrook River of Captain Argoll, there is yet another bit of history which fairly establishes the fact that in the early part of the seventeenth century buffaloes inhabited the banks of the Potomac between this city and the lower falls.  In 1624 an English fur trader named Henry Fleet came hither to trade with the Anacostian Indians, who then inhabited the present site of the city of Washington, and with the tribes of the Upper Potomac.  In his journal (discovered a few years since in the Lambeth Library, London) Fleet gave a quaint description of the city’s site as it then appeared.  The following is from the explorer’s journal:

“Monday, the 25th June, we set sail for the town of Tohoga, where we came to an anchor 2 leagues short of the falls. \* \* \* This place, without question, is the most pleasant and healthful place in all this country, and most convenient for habitation, the air temperate in summer and not violent in winter.  It aboundeth with all manner of fish.  The Indians in one night commonly will catch thirty sturgeons in a place where the river is not above 12 fathoms broad, and as for deer, buffaloes, bears, turkeys, the woods do swarm with them. \* \* \* The 27th of June I manned my shallop and went up with the flood, the tide rising about 4 feet at this place.  We had not rowed above 3 miles, but we might hear the falls to roar about 6 miles distant."[7]

[Note 7:  Charles Burr Todd’s “Story of Washington,” p. 18.  New York, 1889.]

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*Maryland*.—­There is no evidence that the bison ever inhabited Maryland, except what has already been adduced with reference to the District of Columbia.  If either of the references quoted may be taken as conclusive proof, and I see no reason for disputing either, then the fact that the bison once ranged northward from Virginia into Maryland is fairly established.  There is reason to expect that fossil remains of *Bison americanus* will yet be found both in Maryland and the District of Columbia, and I venture to predict that this will yet occur.

*Virginia*.—­Of the numerous references to the occurrence of the bison in Virginia, it is sufficient to allude to Col.  William Byrd’s meetings with buffaloes in 1620, while surveying the southern boundary of the State, about 155 miles from the coast, as already quoted; the references to the discovery of buffaloes on the eastern side of the Virginia mountains, quoted by Mr. Allen from Salmon’s “Present State of Virginia,” page 14 (London, 1737), and the capture *and domestication* of buffaloes in 1701 by the Huguenot settlers at Manikintown, which was situated on the James River, about 14 miles above Richmond.  Apparently, buffaloes were more numerous in Virginia than in any other of the Atlantic States.

*North* *Carolina*.—­Colonel Byrd’s discoveries along the interstate boundary between Virginia and North Carolina fixes the presence of the bison in the northern part of the latter State at the date of the survey.  The following letter to Prof.  G. Brown Goode, dated Birdsnest post-office, Va., August 6, 1888, from Mr. C. R. Moore, furnishes reliable evidence of the presence of the buffalo at another point in North Carolina:  “In the winter of 1857 I was staying for the night at the house of an old gentleman named Houston.  I should judge he was seventy then.  He lived near Buffalo Ford, on the Catawba River, about 4 miles from Statesville, N. C. I asked him how the ford got its name.  He told me that his grandfather told him that when he was a boy the buffalo crossed there, and that when the rocks in the river were bare they would eat the moss that grew upon them.”  The point indicated is in longitude 81° west and the date not far from 1750.

*South* *Carolina*.—­Professor Allen cites numerous authorities, whose observations furnish abundant evidence of the existence of the buffalo in South Carolina during the first half of the eighteenth century.  From these it is quite evident that in the northwestern half of the State buffaloes were once fairly numerous.  Keating declares, on the authority of Colhoun, “and we know that some of those who first settled the Abbeville district in South Carolina, in 1756, found the buffalo there."[8] This appears to be the only definite locality in which the presence of the species was recorded.

[Note 8:  Long’s Expedition to the Source of the St. Peter’s River, 1823, *ii*, p. 26.]

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*Georgia*.—­The extreme southeastern limit of the buffalo in the United States was found on the coast of Georgia, near the mouth of the Altamaha River, opposite St. Simon’s Island.  Mr. Francis Moore, in his “Voyage to Georgia,” made in 1736 and reported upon in 1744,[9] makes the following observation:

[Note 9:  Coll.  Georgia Hist.  Soc., I, p. 117.]

“The island [St. Simon’s] abounds with deer and rabbits.  There are no buffalo in it, though there are large herds upon the main.”  Elsewhere in the same document (p. 122) reference is made to buffalo-hunting by Indians on the main-land near Darien.

In James E. Oglethorpe’s enumeration (A.  D. 1733) of the wild beasts of Georgia and South Carolina he mentions “deer, elks, bears, wolves, and buffaloes."[10]

[Note 10:  Ibid., I, p. 51.]

Up to the time of Moore’s voyage to Georgia the interior was almost wholly unexplored, and it is almost certain that had not the “large herds of buffalo on the main-land” existed within a distance of 20 or 30 miles or less from the coast, the colonists would have had no knowledge of them; nor would the Indians have taken to the war-path against the whites at Darien “under pretense of hunting buffalo.”

*Alabama*.—­Having established the existence of the bison in northwestern Georgia almost as far down as the center of the State, and in Mississippi down to the neighborhood of the coast, it was naturally expected that a search of historical records would reveal evidence that the bison once inhabited the northern half of Alabama.  A most careful search through all the records bearing upon the early history and exploration of Alabama, to be found in the Library of Congress, failed to discover the slightest reference to the existence of the species in that State, or even to the use of buffalo skins by any of the Alabama Indians.  While it is possible that such a hiatus really existed, in this instance its existence would be wholly unaccountable.  I believe that the buffalo once inhabited the northern half of Alabama, even though history fails to record it.

*Louisiana* *and* *Mississippi*.—­At the beginning of the eighteenth century, buffaloes were plentiful in southern Mississippi and Louisiana, not only down to the coast itself, from Bay St. Louis to Biloxi, but even in the very Delta of the Mississippi, as the following record shows.  In a “Memoir addressed to Count de Pontchartrain,” December 10, 1697, the author, M. de Remonville, describes the country around the mouth of the Mississippi, now the State of Louisiana, and further says:[11]

“A great abundance of wild cattle are also found there, which might be domesticated by rearing up the young calves.”  Whether these animals were buffaloes might be considered an open question but for the following additional information, which affords positive evidence:  “The trade in furs and peltry would be immensely valuable and exceedingly profitable.  We could also draw from thence a great quantity of buffalo hides every year, as the plains are filled with the animals.”

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In the same volume, page 47, in a document entitled “Annals of Louisiana from 1698 to 1722, by M. Penicaut” (1698), the author records the presence of the buffalo on the Gulf coast on the banks of the Bay St. Louis, as follows:  “The next day we left Pea Island, and passed through the Little Rigolets, which led into the sea about three leagues from the Bay of St. Louis.  We encamped at the entrance of the bay, near a fountain of water that flows from the hills, and which was called at this time Belle Fountain.  We hunted during several days upon the coast of this bay, and filled our boats with the meat of the deer, buffaloes, and other wild game which we had killed, and carried it to the fort (Biloxi).”

[Note 11:  Hist.  Coll. of Louisiana and Florida, B. F. French, 1869, first series, p. 2.]

The occurrence of the buffalo at Natchez is recorded,[12] and also (p. 115) at the mouth of Red River, as follows:  “We ascended the Mississippi to Pass Manchac, where we killed fifteen buffaloes.  The next day we landed again, and killed eight more buffaloes and as many deer.”

[Note 12:  Ibid., pp. 88-91.]

The presence of the buffalo in the Delta of the Mississippi was observed and recorded by D’Iberville in 1699.[13]

[Note 13:  Hist.  Coll. of Louisiana and Florida, French, second series, p. 58.]

According to Claiborne,[14] the Choctaws have an interesting tradition in regard to the disappearance of the buffalo from Mississippi.  It relates that during the early part of the eighteenth century a great drought occurred, which was particularly severe in the prairie region.  For three years not a drop of rain fell.  The Nowubee and Tombigbee Rivers dried up and the forests perished.  The elk and buffalo, which up to that time had been numerous, all migrated to the country beyond the Mississippi, and never returned.

[Note 14:  Mississippi as a Province, Territory, and State, p. 484.]

*Texas*.—­It will be remembered that it was in southeastern Texas, in all probability within 50 miles of the present city of Houston, that the earliest discovery of the American bison on its native heath was made in 1530 by Cabeza de Vaca, a half-starved, half-naked, and wholly wretched Spaniard, almost the only surviving member of the celebrated expedition which burned its ships behind it.  In speaking of the buffalo in Texas at the earliest periods of which we have any historical record, Professor Allen says:  “They were also found in immense herds on the coast of Texas, at the Bay of St. Bernard (Matagorda Bay), and on the lower part of the Colorado (Rio Grande, according to some authorities), by La Salle, in 1685, and thence northwards across the Colorado, Brazos, and Trinity Rivers.”  Joutel says that when in latitude 28° 51’ “the sight of abundance of goats and bullocks, differing in shape from ours, and running along the coast, heightened our earnestness to be ashore.”  They afterwards landed in St. Louis Bay (now called Matagorda Bay), where they found buffaloes in such numbers on the Colorado River that they called it La Rivière aux Boeufs.[15] According to Professor Allen, the buffalo did not inhabit the coast of Texas east of the mouth of the Brazos River.

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[Note 15:  The American Bisons, Living and Extinct, p. 132.]

It is a curious coincidence that the State of Texas, wherein the earliest discoveries and observations upon the bison were made, should also now furnish a temporary shelter for one of the last remnants of the great herd.

*Mexico*.—­In regard to the existence of the bison south of the Rio Grande, in old Mexico, there appears to be but one authority on record, Dr. Berlandier, who at the time of his death left in *Ms*. a work on the mammals of Mexico.  At one time this *Ms*. was in the Smithsonian Institution, but it is there no longer, nor is its fate even ascertainable.  It is probable that it was burned in the fire that destroyed a portion of the Institution in 1865.  Fortunately Professor Allen obtained and published in his monograph (in French) a copy of that portion of Dr. Berlandier’s work relating to the presence of the bison in Mexico,[16] of which the following is a translation:

[Note 16:  The American Bisons, pp. 129-130.]

“In Mexico, when the Spaniards, ever greedy for riches, pushed their explorations to the north and northeast, it was not long before they met with the buffalo.  In 1602 the Franciscan monks who discovered Nuevo Leon encountered in the neighborhood of Monterey numerous herds of these quadrupeds.  They were also distributed in Nouvelle Biscaye (States of Chihuahua and Durango), and they sometimes advanced to the extreme south of that country.  In the eighteenth century they concentrated more and more toward the north, but still remained very abundant in the neighborhood of the province of Bexar.  At the commencement of the nineteenth century we see them recede gradually in the interior of the country to such an extent that they became day by day scarcer and scarcer about the settlements.  Now, it is not in their periodical migrations that we meet them near Bexar.  Every year in the spring, in April or May, they advance toward the north, to return again to the southern regions in September and October.  The exact limits of these annual migrations are unknown; it is, however, probable that in the north they never go beyond the banks of the Rio Bravo, at least in the States of Cohahuila and Texas.  Toward the north, not being checked by the currents of the Missouri, they progress even as far as Michigan, and they are found in summer in the Territories and interior States of the United States of North America.  The route which these animals follow in their migrations occupies a width of several miles, and becomes so marked that, besides the verdure destroyed, one would believe that the fields had been covered with manure.

“These migrations are not general, for certain bands do not seem to follow the general mass of their kin, but remain stationary throughout the whole year on the prairies covered with a rich vegetation on the banks of the Rio de Guadelupe and the Rio Colorado of Texas, not far from the shores of the Gulf, to the east of the colony of San Felipe, precisely at the same spot where La Salle and his traveling companions saw them two hundred years before.  The Rev. Father Damian Mansanet saw them also as in our days on the shores of Texas, in regions which have since been covered with the habitations, hamlets, and villages of the new colonists, and from whence they have disappeared since 1828.”

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[Illustration:  *Head* *of* *buffalo* *bull* From specimen in the National Museum Group.  Reproduced from the *Cosmopolitan Magazine*, by permission of the publishers.]

“From the observations made on this subject we may conclude that the buffalo inhabited the temperate zone of the New World, and that they inhabited it at all times.  In the north they never advanced beyond the 48th or 58th degree of latitude, and in the south, although they may have reached as low as 25°, they scarcely passed beyond the 27th or 28th degree (north latitude), at least in the inhabited and known portions of the country.”

*New* *Mexico*.—­In 1542 Coronado, while on his celebrated march, met with vast herds of buffalo on the Upper Pecos River, since which the presence of the species in the valley of the Pecos has been well known.  In describing the journey of Espejo down the Pecos River in the year 1584, Davis says (Spanish Conquest of New Mexico, p. 260):  “They passed down a river they called *Rio de las Vacas*, or the River of Oxen [the river Pecos, and the same Cow River that Vaca describes, says Professor Allen], and was so named because of the great number of buffaloes that fed upon its banks.  They traveled down this river the distance of 120 leagues, all the way passing through great herds of buffaloes.”

Professor Allen locates the western boundary of the buffalo in New Mexico even as far west as the western side of Rio Grande del Norte.

UTAH.—­It is well known that buffaloes, though in very small numbers, once inhabited northeastern Utah, and that a few were killed by the Mormon settlers prior to 1840 in the vicinity of Great Salt Lake.  In the museum at Salt Lake City I was shown a very ancient mounted head of a buffalo bull which was said to have been killed in the Salt Lake Valley.  It is doubtful that such was really fact.  There is no evidence that the bison ever inhabited the southwestern half of Utah, and, considering the general sterility of the Territory as a whole previous to its development by irrigation, it is surprising that any buffalo in his senses would ever set foot in it at all.

IDAHO.—­The former range of the bison probably embraced the whole of Idaho.  Fremont states that in the spring of 1824 “the buffalo were spread in immense numbers over the Green River and Bear River Valleys, and through all the country lying between the Colorado, or Green River of the Gulf of California, and Lewis’ Fork of the Columbia River, the meridian of Fort Hall then forming the western limit of their range.” [In J. K. Townsend’s “Narrative of a Journey across the Rocky Mountains,” in 1834, he records the occurrence of herds near the Mellade and Boise and Salmon Rivers, ten days’ journey—­200 miles—­west of Fort Hall.] The buffalo then remained for many years in that country, and frequently moved down the valley of the Columbia, on both sides of the river, as far as the Fishing Falls.  Below

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this point they never descended in any numbers.  About 1834 or 1835 they began to diminish very rapidly, and continued to decrease until 1838 or 1840, when, with the country we have just described, they entirely abandoned all the waters of the Pacific north of Lewis’s Fork of the Columbia [now called Snake] River.  At that time the Flathead Indians were in the habit of finding their buffalo on the heads of Salmon River and other streams of the Columbia.

OREGON.—­The only evidence on record of the occurrence of the bison in Oregon is the following, from Professor Allen’s memoir (p. 119):  “Respecting its former occurrence in eastern Oregon, Prof.  O. C. Marsh, under date of New Haven, February 7, 1875, writes me as follows:  ’The most western point at which I have myself observed remains of the buffalo was in 187 on Willow Creek, eastern Oregon, among the foot hills of the eastern side of the Blue Mountains.  This is about latitude 44°.  The bones were perfectly characteristic, although nearly decomposed.’”

The remains must have been those of a solitary and very enterprising straggler.

THE NORTHWEST TERRITORIES (British).—­At two or three points only did the buffaloes of the British Possessions cross the Rocky Mountain barrier toward British Columbia.  One was the pass through which the Canadian Pacific Railway now runs, 200 miles north of the international boundary.  According to Dr. Richardson, the number of buffaloes which crossed the mountains at that point were sufficiently noticeable to constitute a feature of the fauna on the western side of the range.  It is said that buffaloes also crossed by way of the Kootenai Pass, which is only a few miles north of the boundary line, but the number which did so must have been very small.

As might be expected from the character of the country, the favorite range of the bison in British America was the northern extension of the great pasture region lying between the Missouri River and Great Slave Lake.  The most northerly occurrence of the bison is recorded as an observation of Franklin in 1820 at Slave Point, on the north side of Great Slave Lake.  “A few frequent Slave Point, on the north side of the lake, but this is the most northern situation in which they were observed by Captain Franklin’s party."[17]

[Note 17:  Sabine, Zoological Appendix to “Franklin’s Journey,” p. 668.]

Dr. Richardson defined the eastern boundary of the bison’s range in British America as follows:  “They do not frequent any of the districts formed of primitive rocks, and the limits of their range to the eastward, within the Hudson’s Bay Company’s territories, may be correctly marked on the map by a line commencing in longitude 97°, on the Red River, which flows into the south end of Lake Winnipeg, crossing the Saskatchewan to the westward of the Basquian Hill, and running thence by the Athapescow to the east end of Great Slave Lake.”  Their migrations westward were formerly limited to the Rocky Mountain range, and they are still unknown in New Caledonia and on the shores of the Pacific to the north of the Columbia River; but of late years they have found out a passage across the mountains near the sources of the Saskatchewan, and their numbers to the westward are annually increasing.[18]

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[Note 18:  Fauna Boreali-Americana, vol. 1, p, 279-280.]

*Great Slave Lake.*—­That the buffalo inhabited the southern shore of this lake as late as 1871 is well established by the following letter from Mr. E. W. Nelson to Mr. J. A. Allen, under date of July 11, 1877:[19] “I have met here [St. Michaels, Alaska] two gentlemen who crossed the mountains from British Columbia and came to Fort Yukon through British America, from whom I have derived some information about the buffalo (*Bison americanus*) which will be of interest to you.  These gentlemen descended the Peace River, and on about the one hundred and eighteenth degree of longitude made a portage to Hay River, directly north.  On this portage they saw thousands of buffalo skulls, and old trails, in some instances 2 or 3 feet deep, leading east and west.  They wintered on Hay River near its entrance into Great Slave Lake, and here found the buffalo still common, occupying a restricted territory along the southern border of the lake.  This was in 1871.  They made inquiry concerning the large number of skulls seen by them on the portage, and learned that about fifty years before, snow fell to the estimated depth of 14 feet, and so enveloped the animals that they perished by thousands.  It is asserted that these buffaloes are larger than those of the plains.”

[Note 19:  American Naturalist, xi, p. 624.]

MINNESOTA AND WISCONSIN.—­A line drawn from Winnipeg to Chicago, curving slightly to the eastward in the middle portion, will very nearly define the eastern boundary of the buffalo’s range in Minnesota and Wisconsin.

ILLINOIS AND INDIANA.—­The whole of these two States were formerly inhabited by the buffalo, the fertile prairies of Illinois being particularly suited to their needs.  It is doubtful whether the range of the species extended north of the northern boundary of Indiana, but since southern Michigan was as well adapted to their support as Ohio or Indiana, their absence from that State must have been due more to accident than design.

OHIO.—­The southern shore of Lake Erie forms part of the northern boundary of the bison’s range in the eastern United States.  La Hontan explored Lake Erie in 1687 and thus describes its southern shore:  “I can not express what quantities of Deer and Turkeys are to be found in these Woods, and in the vast Meads that lye upon the South side of the Lake.  At the bottom of the Lake we find beeves upon the Banks of two pleasant Rivers that disembogue into it, without Cataracts or Rapid Currents."[20] It thus appears that the southern shore of Lake Erie forms part of the northern boundary of the buffalo’s range in the eastern United States.

[Note 20:  J. A. Allen’s *American Bisons*, p. 107.]

NEW YORK.—­In regard to the presence of the bison in any portion of the State of New York, Professor Allen considers the evidence as fairly conclusive that it once existed in western New York, not only in the vicinity of the eastern end of Lake Erie, where now stands the city of Buffalo, at the mouth of a large creek of the same name, but also on the shore of Lake Ontario, probably in Orleans County.  In his monograph of “The American Bisons,” page 107, he gives the following testimony and conclusions on this point:

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“The occurrence of a stream in western New York, called Buffalo Creek, which empties into the eastern end of Lake Erie, is commonly viewed as traditional evidence of its occurrence at this point, but positive testimony to this effect has thus far escaped me.

“This locality, if it actually came so far eastward, must have formed the eastern limit of its range along the lakes.  I have found only highly questionable allusions to the occurrence of buffaloes along the southern shore of Lake Ontario.  Keating, on the authority of Colhoun, however, has cited a passage from Morton’s “New English Canaan” as proof of their former existence in the neighborhood of this lake.  Morton’s statement is based on Indian reports, and the context gives sufficient evidence of the general vagueness of his knowledge of the region of which he was speaking.  The passage, printed in 1637 is as follows:  They [the Indians] have also made descriptions of great heards of well growne beasts that live about the parts of this lake [Erocoise] such as the Christian world (untill this discovery) hath not bin made acquainted with.  These Beasts are of the bignesse of a Cowe, their flesh being very good foode, their hides good lether, their fleeces very usefull, being a kinde of wolle as fine almost as the wolle of the Beaver, and the Salvages doe make garments thereof.  It is tenne yeares since first the relation of these things came to the eares of the English.’  The ‘beast’ to which allusion is here made [says Professor Allen] is unquestionably the buffalo, but the locality of Lake ‘Erocoise’ is not so easily settled.  Colhoun regards it, and probably correctly, as identical with Lake Ontario. \* \* \* The extreme northeastern limit of the former range of the buffalo seems to have been, as above stated, in western New York, near the eastern end of Lake Erie.  That it probably ranged thus far there is fair evidence.”

PENNSYLVANIA.—­From the eastern end of Lake Erie the boundary of the bison’s habitat extends south into western Pennsylvania, to a marsh called Buffalo Swamp on a map published by Peter Kalm in 1771.  Professor Allen says it “is indicated as situated between the Alleghany River and the West Branch of the Susquehanna, near the heads of the Licking and Toby’s Creeks (apparently the streams now called Oil Creek and Clarion Creek).”  In this region there were at one time thousands of buffaloes.  While there is not at hand any positive evidence that the buffalo ever inhabited the southwestern portion of Pennsylvania, its presence in the locality mentioned above, and in West Virginia generally, on the south, furnishes sufficient reason for extending the boundary so as to include the southwestern portion of the State and connect with our starting point, the District of Columbia.

**III.  ABUNDANCE.**

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Of all the quadrupeds that have lived upon the earth, probably no other species has ever marshaled such innumerable hosts as those of the American bison.  It would have been as easy to count or to estimate the number of leaves in a forest as to calculate the number of buffaloes living at any given time during the history of the species previous to 1870.  Even in South Central Africa, which has always been exceedingly prolific in great herds of game, it is probable that all its quadrupeds taken together on an equal area would never have more than equaled the total number of buffalo in this country forty years ago.

To an African hunter, such a statement may seem incredible, but it appears to be fully warranted by the literature of both branches of the subject.

Not only did the buffalo formerly range eastward far into the forest regions of western New York, Pennsylvania, Virginia, the Carolinas, and Georgia, but in some places it was so abundant as to cause remark.  In Mr. J. A. Allen’s valuable monograph[21] appear a great number of interesting historical references on this subject, as indeed to every other relating to the buffalo, a few of which I will take the liberty of quoting.

[Note 21:  All who are especially interested in the life history of the buffalo, both scientific and economical, will do well to consult Mr. Allen’s monograph, “The American Bisons, Living and Extinct,” if it be accessible.  Unfortunately it is a difficult matter for the general reader to obtain it.  A reprint of the work as originally published, but omitting the map, plates, and such of the subject-matter as relates to the extinct species, appears in Hayden’s “Report of the Geological Survey of the Territories,” for 1875 (pp. 443-587), but the volume has for several years been out of print.

The memoir as originally published has the following titles:

*Memoirs of the Geological Survey of Kentucky.| N. S. Shaler, Director.|
Vol. I. Part II.|—­| The American Bisons,| living and extinct.| By J. A.
Allen.| With twelve plates and map.|--| University press, Cambridge:|
Welch, Bigelow & Co.| 1876.*

*Memoirs of the Museum of Comparative Zoology,| at Harvard College, Cambridge, Mass.| Vol.  IV.  No. 10.|—­| The American Bisons,| living and extinct.| By J. A. Allen.| Published by permission of N. S. Shaler, Director of the Kentucky| Geological Survey.| With twelve plates and a map.| University press, Cambridge:| Welch, Bigelow & Co.| 1876.|*

*4to., pp. i-ix, 1-246, 1 col’d map, 12 pl., 13 ll. explanatory, 2 wood-cuts in text.*

These two publications were simultaneous, and only differed in the titles.  Unfortunately both are of greater rarity than the reprint referred to above.]

In the vicinity of the spot where the town of Clarion now stands, in northwestern Pennsylvania, Mr. Thomas Ashe relates that one of the first settlers built his log cabin near a salt spring which was visited by buffaloes in such numbers that “he supposed there could not have been less than two thousand in the neighborhood of the spring.”  During the first years of his residence there, the buffaloes came in droves of about three hundred each.

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Of the Blue Licks in Kentucky, Mr. John Filson thus wrote, in 1784:  “The amazing herds of buffaloes which resort thither, by their size and number, fill the traveller with amazement and terror, especially when he beholds the prodigious roads they have made from all quarters, as if leading to some populous city; the vast space of land around these springs desolated as if by a ravaging enemy, and hills reduced to plains; for the land near these springs is chiefly hilly. \* \* \* I have heard a hunter assert he saw above one thousand buffaloes at the Blue Licks at once; so numerous were they before the first settlers had wantonly sported away their lives.”  Col.  Daniel Boone declared of the Red River region in Kentucky, “The buffaloes were more frequent than I have seen cattle in the settlements, browzing on the leaves of the cane, or cropping the herbage of those extensive plains, fearless because ignorant of the violence of man.  Sometimes we saw hundreds in a drove, and the numbers about the salt springs were amazing.”

According to Ramsey, where Nashville now stands, in 1770 there were “immense numbers of buffalo and other wild game.  The country was crowded with them.  Their bellowings sounded from the hills and forest.”  Daniel Boone found vast herds of buffalo grazing in the valleys of East Tennessee, between the spurs of the Cumberland mountains.

Marquette declared that the prairies along the Illinois River were “covered with buffaloes.”  Father Hennepin, in writing of northern Illinois, between Chicago and the Illinois River, asserted that “there must be an innumerable quantity of wild bulls in that country, since the earth is covered with their horns. \* \* \* They follow one another, so that you may see a drove of them for above a league together. \* \* \* Their ways are as beaten as our great roads, and no herb grows therein.”

Judged by ordinary standards of comparison, the early pioneers of the last century thought buffalo were abundant in the localities mentioned above.  But the herds which lived east of the Mississippi were comparatively only mere stragglers from the innumerable mass which covered the great western pasture region from the Mississippi to the Rocky Mountains, and from the Rio Grande to Great Slave Lake.  The town of Kearney, in south central Nebraska, may fairly be considered the geographical center of distribution of the species, as it originally existed, but ever since 1800, and until a few years ago, the center of population has been in the Black Hills of southwestern Dakota.

Between the Rocky Mountains and the States lying along the Mississippi River on the west, from Minnesota to Louisiana, the whole country was one vast buffalo range, inhabited by millions of buffaloes.  One could fill a volume with the records of plainsmen and pioneers who penetrated or crossed that vast region between 1800 and 1870, and were in turn surprised, astounded, and frequently dismayed by the tens of thousands

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of buffaloes they observed, avoided, or escaped from.  They lived and moved as no other quadrupeds ever have, in great multitudes, like grand armies in review, covering scores of square miles at once.  They were so numerous they frequently stopped boats in the rivers, threatened to overwhelm travelers on the plains, and in later years derailed locomotives and cars, until railway engineers learned by experience the wisdom of stopping their trains whenever there were buffaloes crossing the track.  On this feature of the buffalo’s life history a few detailed observations may be of value.

Near the mouth of the White River, in southwestern Dakota, Lewis and Clark saw (in 1806) a herd of buffalo which caused them to make the following record in their journal:

“These last animals [buffaloes] are now so numerous that from an eminence we discovered more than we had ever seen before at one time; and if it be not impossible to calculate the moving multitude, which darkened the whole plains, we are convinced that twenty thousand would be no exaggerated number.”

When near the mouth of the Yellowstone, on their way down the Missouri, a previous record had been made of a meeting with other herds:

“The buffalo now appear in vast numbers.  A herd happened to be on their way across the river [the Missouri].  Such was the multitude of these animals that although the river, including an island over which they passed, was a mile in length, the herd stretched as thick as they could swim completely from one side to the other, and the party was obliged to stop for an hour.  They consoled themselves for the delay by killing four of the herd, and then proceeded till at the distance of 45 miles they halted on an island, below which two other herds of buffalo, as numerous as the first, soon after crossed the river."[22]

[Note 22:  Lewis and Clark’s Exped., II, p. 395.]

Perhaps the most vivid picture ever afforded of the former abundance of buffalo is that given by Col.  R. I. Dodge in his “Plains of the Great West,” p. 120, *et seq.* It is well worth reproducing entire:

“In May, 1871, I drove in a light wagon from Old Fort Zara to Fort Larned, on the Arkansas, 34 miles.  At least 25 miles of this distance was through one immense herd, composed of countless smaller herds of buffalo then on their journey north.  The road ran along the broad level ‘bottom,’ or valley, of the river. \* \* \*

“The whole country appeared one great mass of buffalo, moving slowly to the northward; and it was only when actually among them that it could be ascertained that the apparently solid mass was an agglomeration of innumerable small herds, of from fifty to two hundred animals, separated from the surrounding herds by greater or less space, but still separated.  The herds in the valley sullenly got out of my way, and, turning, stared stupidly at me, sometimes at only a few yards’ distance.  When I had reached a point where the

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hills were no longer more than a mile from the road, the buffalo on the hills, seeing an unusual object in their rear, turned, stared an instant, then started at full speed directly towards me, stampeding and bringing with them the numberless herds through which they passed, and pouring down upon me all the herds, no longer separated, but one immense compact mass of plunging animals, mad with fright, and as irresistible as an avalanche.

“The situation was by no means pleasant.  Reining up my horse (which was fortunately a quiet old beast that had been in at the death of many a buffalo, so that their wildest, maddest rush only caused him to cock his ears in wonder at their unnecessary excitement), I waited until the front of the mass was within 50 yards, when a few well-directed shots from my rifle split the herd, and sent it pouring off in two streams to my right and left.  When all had passed me they stopped, apparently perfectly satisfied, though thousands were yet within reach of my rifle and many within less than 100 yards.  Disdaining to fire again, I sent my servant to cut out the tongues of the fallen.  This occurred so frequently within the next 10 miles, that when I arrived at Fort Larned I had twenty-six tongues in my wagon, representing the greatest number of buffalo that my conscience can reproach me for having murdered on any single day.  I was not hunting, wanted no meat, and would not voluntarily have fired at these herds.  I killed only in self-preservation and fired almost every shot from the wagon.”

At my request Colonel Dodge has kindly furnished me a careful estimate upon which to base a calculation of the number of buffaloes in that great herd, and the result is very interesting.  In a private letter, dated September 21, 1887, he writes as follows:

“The great herd on the Arkansas through which I passed could not have averaged, *at rest*, over fifteen or twenty individuals to the acre, but was, from my own observation, not less than 25 miles wide, and from reports of hunters and others it was about five days in passing a given point, or not less than 50 miles deep.  From the top of Pawnee Rock I could see from 6 to 10 miles in almost every direction.  This whole vast space was covered with buffalo, looking at a distance like one compact mass, the visual angle not permitting the ground to be seen.  I have seen such a sight a great number of times, but never on so large a scale.

“That was the last of the great herds.”

With these figures before us, it is not difficult to make a calculation that will be somewhere near the truth of the number of buffaloes actually seen in one day by Colonel Dodge on the Arkansas River during that memorable drive, and also of the number of head in the entire herd.

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According to his recorded observation, the herd extended along the river for a distance of 25 miles, which was in reality the width of the vast procession that was moving north, and back from the road as far as the eye could reach, on both sides.  It is making a low estimate to consider the extent of the visible ground at 1 mile on either side.  This gives a strip of country 2 miles wide by 25 long, or a total of 50 square miles covered with buffalo, averaging from fifteen to twenty to the acre.[23] Taking the lesser number, in order to be below the truth rather than above it, we find that the number actually seen on that day by Colonel Dodge was in the neighborhood of 480,000, not counting the additional number taken in at the view from the top of Pawnee Rock, which, if added, would easily bring the total up to a round half million!

[Note 23:  On the plains of Dakota, the Rev. Mr. Belcourt (Schoolcraft’s N. A. Indians, IV, p. 108) once counted two hundred and twenty-eight buffaloes, a part of a great herd, feeding on a single acre of ground.  This of course was an unusual occurrence with buffaloes not stampeding, but practically at rest.  It is quite possible also that the extent of the ground may have been underestimated.]

If the advancing multitude had been at all points 50 miles in length (as it was known to have been in some places at least) by 25 miles in width, and still averaged fifteen head to the acre of ground, it would have contained the enormous number of 12,000,000 head.  But, judging from the general principles governing such migrations, it is almost certain that the moving mass advanced in the shape of a wedge, which would make it necessary to deduct about two-third from the grand total, which would leave 4,000,000 as our estimate of the actual number of buffaloes in this great herd, which I believe is more likely to be below the truth than above it.

No wonder that the men of the West of those days, both white and red, thought it would be impossible to exterminate such a mighty multitude.  The Indians of some tribes believed that the buffaloes issued from the earth continually, and that the supply was necessarily inexhaustible.  And yet, in four short years the southern herd was almost totally annihilated.

With such a lesson before our eyes, confirmed in every detail by living testimony, who will dare to say that there will be an elk, moose, caribou, mountain sheep, mountain goat, antelope, or black-tail deer left alive in the United States in a wild state fifty years from this date, ay, or even twenty-five?

Mr. William Blackmore contributes the following testimony to the abundance of buffalo in Kansas:[24]

[Note 24:  Plains of the Great West, p. xvi.]

“In the autumn of 1868, whilst crossing the plains on the Kansas Pacific Railroad, for a distance of upwards of 120 miles, between Ellsworth and Sheridan, we passed through an almost unbroken herd of buffalo.  The plains were blackened with them, and more than once the train had to stop to allow unusually large herds to pass. \* \* \* In 1872, whilst on a scout for about a hundred miles south of Fort Dodge to the Indian Territory, we were never out of sight of buffalo.”

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Twenty years hence, when not even a bone or a buffalo-chip remains above ground throughout the West to mark the presence of the buffalo, it may be difficult for people to believe that these animals ever existed in such numbers as to constitute not only a serious annoyance, but very often a dangerous menace to wagon travel across the plains, and also to stop railway trains, and even throw them off the track.  The like has probably never occurred before in any country, and most assuredly never will again, if the present rate of large game destruction all over the world can be taken as a foreshadowing of the future.  In this connection the following additional testimony from Colonel Dodge ("Plains of the Great West,” p. 121) is of interest:

“The Atchison, Topeka and Santa Fé Railroad was then [in 1871-’72] in process of construction, and nowhere could the peculiarity of the buffalo of which I am speaking be better studied than from its trains.  If a herd was on the north side of the track, it would stand stupidly gazing, and without a symptom of alarm, although the locomotive passed within a hundred yards.  If on the south side of the track, even though at a distance of 1 or 2 miles from it, the passage of a train set the whole herd in the wildest commotion.  At full speed, and utterly regardless of the consequences, it would make for the track on its line of retreat.  If the train happened not to be in its path, it crossed the track and stopped satisfied.  If the train was in its way, each individual buffalo went at it with the desperation of despair, plunging against or between locomotive and cars, just as its blind madness chanced to direct it.  Numbers were killed, but numbers still pressed on, to stop and stare as soon as the obstacle had passed.  After having trains thrown off the track twice in one week, conductors learned to have a very decided respect for the idiosyncrasies of the buffalo, and when there was a possibility of striking a herd ‘on the rampage’ for the north side of the track, the train was slowed up and sometimes stopped entirely.”

The accompanying illustration, reproduced from the “Plains of the Great West,” by the kind permission of the author, is, in one sense, ocular proof that collisions between railway trains and vast herds of buffaloes were so numerous that they formed a proper subject for illustration.  In regard to the stoppage of trains and derailment of locomotives by buffaloes, Colonel Dodge makes the following allusion in the private letter already referred to:  “There are at least a hundred reliable railroad men now employed on the Atchison, Topeka and Santa Fé Railroad who were witnesses of, and sometimes sufferers from, the wild rushes of buffalo as described on page 121 of my book.  I was at the time stationed at Fort Dodge, and I was personally cognizant of several of these ‘accidents.’”

[Illustration:  SLAUGHTER OF BUFFALO ON THE KANSAS PACIFIC RAILROAD.  Reproduced from “The Plains of the Great West,” by permission of the author, Col.  R. I. Dodge.]

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The following, from the ever pleasing pen of Mr. Catlin, is of decided interest in this connection:

“In one instance, near the mouth of White River, we met the most immense herd crossing the Missouri River [in Dakota], and from an imprudence got our boat into imminent danger amongst them, from which we were highly delighted to make our escape.  It was in the midst of the ’running season,’ and we had heard the ‘roaring’ (as it is called) of the herd when we were several miles from them.  When we came in sight, we were actually terrified at the immense numbers that were streaming down the green hills on one side of the river, and galloping up and over the bluffs on the other.  The river was filled, and in parts blackened with their heads and horns, as they were swimming about, following up their objects, and making desperate battle whilst they were swimming.  I deemed it imprudent for our canoe to be dodging amongst them, and ran it ashore for a few hours, where we laid, waiting for the opportunity of seeing the river clear, but we waited in vain.  Their numbers, however, got somewhat diminished at last, and we pushed off, and successfully made our way amongst them.  From the immense numbers that had passed the river at that place, they had torn down the prairie bank of 15 feet in height, so as to form a sort of road or landing place, where they all in succession clambered up.  Many in their turmoil had been wafted below this landing, and unable to regain it against the swiftness of the current, had fastened themselves along in crowds, hugging close to the high bank under which they were standing.  As we were drifting by these, and supposing ourselves out of danger, I drew up my rifle and shot one of them in the head, which tumbled into the water, and brought with him a hundred others, which plunged in, and in a moment were swimming about our canoe, and placing it in great danger.  No attack was made upon us, and in the confusion the poor beasts knew not, perhaps, the enemy that was amongst them; but we were liable to be sunk by them, as they were furiously hooking and climbing on to each other.  I rose in my canoe, and by my gestures and hallooing kept them from coming in contact with us until we were out of their reach."[25]

[Note 25:  Catlin’s North American Indians, II, p. 13.]

**IV.  CHARACTER OF THE SPECIES.**

1. *The buffaloes rank amongst ruminants.*—­With the American people, and through them all others, familiarity with the buffalo has bred contempt.  The incredible numbers in which the animals of this species formerly existed made their slaughter an easy matter, so much so that the hunters and frontiersmen who accomplished their destruction have handed down to us a contemptuous opinion of the size, character, and general presence of our bison.  And how could it be otherwise than that a man who could find it in his heart to murder a majestic bull bison for a hide worth only a dollar should form a one-dollar estimate of the grandest ruminant that ever trod the earth?  Men who butcher African elephants for the sake of their ivory also entertain a similar estimate of their victims.

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With an acquaintance which includes fine living examples of all the larger ruminants of the world except the musk-ox and the European bison, I am sure that the American bison is the grandest of them all.  His only rivals for the kingship are the Indian bison, or gaur (*Bos gaurus*), of Southern India, and the aurochs, or European bison, both of which really surpass him in height, if not in actual balk also.  The aurochs is taller, and possesses a larger pelvis and heavier, stronger hindquarters, but his body is decidedly smaller in all its proportions, which gives him a lean and “leggy” look.  The hair on the head, neck, and forequarters of the aurochs is not nearly so long or luxuriant as on the same parts of the American bison.  This covering greatly magnifies the actual bulk of the latter animal.  Clothe the aurochs with the wonderful pelage of our buffalo, give him the same enormous chest and body, and the result would be a magnificent bovine monster, who would indeed stand without a rival.  But when first-class types of the two species are placed side by side it seems to me that *Bison americanus* will easily rank his European rival.

The gaur has no long hair upon any part of his body or head.  What little hair he has is very short and thin, his hindquarters being almost naked.  I have seen hundreds of these animals at short range, and have killed and skinned several very fine specimens, one of which stood 5 feet 10 inches in height at the shoulders.  But, despite his larger bulk, his appearance is not nearly so striking and impressive as that of the male American bison.  He seems like a huge ox running wild.

The magnificent dark brown frontlet and beard of the buffalo, the shaggy coat of hair upon the neck, hump, and shoulders, terminating at the knees in a thick mass of luxuriant black locks, to say nothing of the dense coat of finer fur on the body and hindquarters, give to our species not only an apparent height equal to that of the gaur, but a grandeur and nobility of presence which are beyond all comparison amongst ruminants.

The slightly larger bulk of the gaur is of little significance in a comparison of the two species; for if size alone is to turn the scale, we must admit that a 500-pound lioness, with no mane whatever, is a more majestic looking animal than a 450-pound lion, with a mane which has earned him his title of king of beasts.

2. *Change of form in captivity.*—­By a combination of unfortunate circumstances, the American bison is destined to go down to posterity shorn of the honor which is his due, and appreciated at only half his worth.  The hunters who slew him were from the very beginning so absorbed in the scramble for spoils that they had no time to measure or weigh him, nor even to notice the majesty of his personal appearance on his native heath.

In captivity he fails to develop as finely as in his wild state, and with the loss of his liberty he becomes a tame-looking animal.  He gets fat and short-bodied, and the lack of vigorous and constant exercise prevents the development of bone and muscle which made the prairie animal what he was.

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From observations made upon buffaloes that have been reared in captivity, I am firmly convinced that confinement and semi-domestication are destined to effect striking changes in the form of *Bison americanus*.  While this is to be expected to a certain extent with most large species, the changes promise to be most conspicuous in the buffalo.  The most striking change is in the body between the hips and the shoulders.  As before remarked, it becomes astonishingly short and rotund, and through liberal feeding and total lack of exercise the muscles of the shoulders and hindquarters, especially the latter, are but feebly developed.

The most striking example of the change of form in the captive buffalo is the cow in the Central Park Menagerie, New York.  Although this animal is fully adult, and has given birth to three fine calves, she is small, astonishingly short-bodied, and in comparison with the magnificently developed cows taken in 1886 by the writer in Montana, she seems almost like an animal of another species.

Both the live buffaloes in the National Museum collection of living animals are developing the same shortness of body and lack of muscle, and when they attain their full growth will but poorly resemble the splendid proportions of the wild specimens in the Museum mounted group, each of which has been mounted from a most careful and elaborate series of post-mortem measurements.  It may fairly be considered, however, that the specimens taken by the Smithsonian expedition were in every way more perfect representatives of the species than have been usually taken in times past, for the simple reason that on account of the muscle they had developed in the numerous chases they had survived, and the total absence of the fat which once formed such a prominent feature of the animal, they were of finer form, more active habit, and keener intelligence than buffaloes possessed when they were so numerous.  Out of the millions which once composed the great northern herd, those represented the survival of the fittest, and their existence at that time was chiefly due to the keenness of their senses and their splendid muscular powers in speed and endurance.

Under such conditions it is only natural that animals of the highest class should be developed.  On the other hand, captivity reverses all these conditions, while yielding an equally abundant food supply.

In no feature is the change from natural conditions to captivity more easily noticeable than in the eye.  In the wild buffalo the eye is always deeply set, well protected by the edge of the bony orbit, and perfect in form and expression.  The lids are firmly drawn around the ball, the opening is so small that the white portion of the eyeball is entirely covered, and the whole form and appearance of the organ is as shapely and as pleasing in expression as the eye of a deer.

In the captive the various muscles which support and control the eyeball seem to relax and thicken, and the ball protrudes far beyond its normal plane, showing a circle of white all around the iris, and bulging out in a most unnatural way.  I do not mean to assert that this is common in captive buffaloes generally, but I have observed it to be disagreeably conspicuous in many.

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Another change which takes place in the form of the captive buffalo is an arching of the back in the middle, which has a tendency to make the hump look lower at the shoulders and visibly alters the outline of the back.  This tendency to “hump up” the back is very noticeable in domestic cattle and horses during rainy weather.  While a buffalo on his native heath would seldom assume such an attitude of dejection and misery, in captivity, especially if it be anything like close confinement, it is often to be observed, and I fear will eventually become a permanent habit.  Indeed, I think it may be confidently predicted that the time will come when naturalists who have never seen a wild buffalo will compare the specimens composing the National Museum group with the living representatives to be seen in captivity and assert that the former are exaggerations in both form and size.

3. *Mounted Specimens in Museums.*—­Of the “stuffed” specimens to be found in museums, all that I have ever seen outside of the National Museum and even those within that institution up to 1886, were “stuffed” in reality as well as in name.  The skins that have been rammed full of straw or excelsior have lost from 8 to 12 inches in height at the shoulders, and the high and sharp hump of the male has become a huge, thick, rounded mass like the hump of a dromedary, and totally unlike the hump of a bison.  It is impossible for any taxidermist to stuff a buffalo-skin with loose materials and produce a specimen which fitly represents the species.  The proper height and form of the animal can be secured and retained only by the construction of a manikin, or statue, to carry the skin.  In view of this fact, which surely must be apparent to even the most casual observer, it is to be earnestly hoped that here no one in authority will ever consent to mount or have mounted a valuable skin of a bison in any other way than over a properly constructed manikin.

4. *The Calf.*—­The breeding season of the buffalo is from the 1st of July to the 1st of October.  The young cow does not breed until she is three years old, and although two calves are sometimes produced at a birth, one is the usual number.  The calves are born in April, May, and June, and sometimes, though rarely, as late as the middle of August.  The calf follows its mother until it is a year old, or even older.  In May, 1886, the Smithsonian expedition captured a calf alive, which had been abandoned by its mother because it could not keep up with her.  The little creature was apparently between two and three weeks old, and was therefore born about May 1.  Unlike the young of nearly all other *Bovidæ*, the buffalo calf during the first months of its existence is clad with hair of a totally different color from that which covers him during the remainder of his life.  His pelage is a luxuriant growth of rather long, wavy hair, of a uniform brownish-yellow or “sandy” color (cinnamon, or yellow ocher, with a shade of Indian yellow) all over the head, body, and tail, in striking contrast with the darker colors of the older animals.  On the lower half of the leg it is lighter, shorter, and straight.  On the shoulders and hump the hair is longer than on the other portions, being 11/2 inches in length, more wavy, and already arranges itself in the tufts, or small bunches, so characteristic in the adult animal.

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On the extremity of the muzzle, including the chin, the hair is very short, straight, and as light in color as the lower portions of the leg.  Starting on the top of the nose, an inch behind the nostrils, and forming a division between the light yellowish muzzle and the more reddish hair on the remainder of the head, there is an irregular band of dark, straight hair, which extends down past the corner of the mouth to a point just back of the chin, where it unites.  From the chin backward the dark band increases in breadth and intensity, and continues back half way to the angle of the jaw.  At that point begins a sort of under mane of wavy, dark-brown hair, nearly 3 inches long, and extends back along the median line of the throat to a point between the fore legs, where it abruptly terminates.  From the back of the head another streak of dark hair extends backward along the top of the neck, over the hump, and down to the lumbar region, where it fades out entirely.  These two dark bands are in sharp contrast to the light sandy hair adjoining.

The tail is densely haired.  The tuft on the end is quite luxuriant, and shows a center of darker hair.  The hair on the inside of the ear is dark, but that on the outside is sandy.

The naked portion of the nose is light Vandyke-brown, with a pinkish tinge, and the edge of the eyelid the same.  The iris is dark brown.  The horn at three months is about 1 inch in length, and is a mere little black stub.  In the male, the hump is clearly defined, but by no means so high in proportion as in the adult animal.  The hump of the calf from which this description is drawn is of about the same relative angle and height as that of an adult cow buffalo.  The specimen itself is well represented in the accompanying plate.

The measurements of this specimen in the flesh were as follows:

+------------------------------------------------------  
---+
| BISON AMERICANUS. (Male; four months old.) |
+---------------------------------------------------------+
| (*No. 15503, National Museum collection.*) |
+---------------------------------------------------------+
| |Feet.|Inches.|
|Height at shoulders | 2 | 8 |
|Length, head and body to insertion of tail | 3 | 101/2 |
|Depth of chest | 1 | 4 |
|Depth of flank | | 10 |
|Girth behind fore leg | 3 | 1/2 |
|From base of horns around end of nose | 1 | 71/2 |
|Length of tail vertebræ | | 7 |
+---------------------------------------------------------+
/pre>
  
The calves begin to shed their coat of red hair about
the beginning of August. The first signs of the
change, however, appear about a month earlier than
that, in the darkening of the mane under the throat,
and also on the top of the neck.[26]

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[Note 26: Our captive had, in some way, bruised
the skin on his forehead, and in June all the hair
came off the top of his head, leaving it quite bald.
We kept the skin well greased with porpoise oil, and
by the middle of July a fine coat of black hair had
grown out all over the surface that had previously
been bare.]
  
By the 1st of August the red hair on the body begins
to fall off in small patches, and the growth of fine,
new, dark hair seems to actually crowd off the old.
As is the case with the adult animals, the shortest
hair is the first to be shed, but the change of coat
takes place in about half the time that it occupies
in the older animals.
  
By the 1st of October the transformation is complete,
and not even a patch of the old red hair remains upon
the new suit of brown. This is far from being
the case with the old bulls and cows, for even up to
the last week in October we found them with an occasional
patch of the old hair still clinging to the new, on
the back or shoulders.
  
Like most young animals, the calf of the buffalo is
very easily tamed, especially if taken when only a
few weeks old. The one captured in Montana by
the writer, resisted at first as stoutly as it was
able, by butting with its head, but after we had tied
its legs together and carried it to camp, across a
horse, it made up its mind to yield gracefully to
the inevitable, and from that moment became perfectly
docile. It very soon learned to drink milk in
the most satisfactory manner, and adapted itself to
its new surroundings quite as readily as any domestic
calf would have done. Its only cry was a low-pitched,
pig-like grunt through the nose, which was uttered
only when hungry or thirsty.
  
I have been told by old frontiersmen and buffalo-hunters
that it used to be a common practice for a hunter
who had captured a young calf to make it follow him
by placing one of his fingers in its mouth, and allowing
the calf to suck at it for a moment. Often a calf
has been induced in this way to follow a horseman
for miles, and eventually to join his camp outfit.
It is said that the same result has been accomplished
with calves by breathing a few times into their nostrils.
In this connection Mr. Catlin’s observations
on the habits of buffalo calves are most interesting.
  
“In pursuing a large herd of buffaloes at the
season when their calves are but a few weeks old,
I have often been exceedingly amused with the curious
maneuvers of these shy little things. Amidst the
thundering confusion of a throng of several hundreds
or several thousands of these animals, there will
be many of the calves that lose sight of their dams;
and being left behind by the throng, and the swift-passing
hunters, they endeavor to secrete themselves, when
they are exceedingly put to it on a level prairie,
where naught can be seen but the short grass of 6 or
8 inches in height, save an occasional bunch of wild
sage a few inches higher, to which the poor affrighted

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things will run, and dropping on their knees, will
push their noses under it and into the grass, where
they will stand for hours, with their eyes shut, imagining
themselves securely hid, whilst they are standing
up quite straight upon their hind feet, and can easily
be seen at several miles distance. It is a familiar
amusement with us, accustomed to these scenes, to retreat
back over the ground where we have just escorted the
herd, and approach these little trembling things,
which stubbornly maintain their positions, with their
noses pushed under the grass and their eyes strained
upon us, us we dismount from our horses and are passing
around them. From this fixed position they are
sure not to move until hands are laid upon them, and
then for the shins of a novice we can extend our sympathy;
or if he can preserve the skin on his bones from the
furious buttings of its head, we know how to congratulate
him on his signal success and good luck.
  
[Illustration: From photograph of group in National
Museum. Engraved by R. H. Carson. BUFFALO
COW, CALF (FOUR MONTHS OLD), AND YEARLING. Reproduced
from the *Cosmopolitan Magazine*, by permission
of the publishers.]
  
“In these desperate struggles for a moment,
the little thing is conquered, and makes no further
resistance. And I have often, in concurrence
with a known custom of the country, held my hands over
the eyes of the calf and breathed a few strong breaths
into its nostrils, after which I have, with my hunting
companions, rode several miles into our encampment
with the little prisoner busily following the heels
of my horse the whole way, as closely and as affectionately
as its instinct would attach it to the company of
its dam.
  
“This is one of the most extraordinary things
that I have met with in the habits of this wild country,
and although I had often heard of it, and felt unable
exactly to believe it, I am now willing to bear testimony
to the fact from the numerous instances which I have
witnessed since I came into the country. During
the time that I resided at this post [mouth of the
Tetón River] in the spring of the year, on my way up
the river, I assisted (in numerous hunts of the buffalo
with the fur company’s men) in bringing in,
in the above manner, several of these little prisoners,
which sometimes followed for 5 or 6 miles close to
our horse’s heels, and even into the fur company’s
fort, and into the stable where our horses were led.
In this way, before I left the headwaters of the Missouri,
I think we had collected about a dozen, which Mr. Laidlaw
was successfully raising with the aid of a good milch
cow."[27]
  
[Note 27: North American Indians, I, 255.]

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It must be remembered, however, that such cases as
the above were exceptional, even with the very young
calves, which alone exhibited the trait described.
Such instances occurred only when buffaloes existed
in such countless numbers that man’s presence
and influence had not affected the character of the
animal in the least. No such instances of innocent
stupidity will ever be displayed again, even by the
youngest calf. The war of extermination, and
the struggle for life and security have instilled
into the calf, even from its birth, a mortal fear of
both men and horses, and the instinct to fly for life.
The calf captured by our party was not able to run,
but in the most absurd manner it butted our horses
as soon as they came near enough, and when Private
Moran attempted to lay hold of the little fellow it
turned upon him, struck him in the stomach with its
head, and sent him sprawling into the sage-brush.
If it had only possessed the strength, it would have
led us a lively chase.
  
During 1886 four other buffalo calves were either
killed or caught by the cowboys on the Missouri-Yellowstone
divide, in the Dry Creek region. All of them
ran the moment they discovered their enemies.
Two were shot and killed. One was caught by a
cowboy named Horace Brodhurst, ear marked, and turned
loose. The fifth one was caught in September on
the Porcupine Creek round-up. He was then about
five months old, and being abundantly able to travel
he showed a clean pair of heels. It took three
fresh horses, one after another, to catch him, and
his final capture was due to exhaustion, and not to
the speed of any of his pursuers. The distance
covered by the chase, from the point where his first
pursuer started to where the third one finally lassoed
him, was considered to be at least 15 miles.
But the capture came to naught, for on the following
day the calf died from overexertion and want of milk.
  
Colonel Dodge states that the very young calves of
a herd have to depend upon the old bulls for protection,
and seldom in vain. The mothers abandon their
offspring on slight provocation, and even none at all
sometimes, if we may judge from the condition of the
little waif that fell into our hands. Had its
mother remained with it, or even in its neighborhood,
we should at least have seen her, but she was nowhere
within a radius of 5 miles at the time her calf was
discovered. Nor did she return to look for it,
as two of us proved by spending the night in the sage-brush
at the very spot where the calf was taken. Colonel
Dodge declares that “the cow seems to possess
scarcely a trace of maternal instinct, and, when frightened,
will abandon and run away from her calf without the
slightest hesitation. \* \* \* When the calves are young
they are always kept in the center of each small herd,
while the bulls dispose themselves on the outside."[28]
  
[Note 28: Plains of the Great West, pp. 124,
125.]
  
Apparently the maternal instinct of the cow buffalo
was easily mastered by fear. That it was often
manifested, however, is proven by the following from
Audubon and Bachman:[29]

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[Note 29: Quadrupeds of North America, vol.
II, pp. 38, 39.]
  
“Buffalo calves are drowned from being unable
to ascend the steep banks of the rivers across which
they have just swam, as the cows cannot help them,
although they stand near the bank, and will not leave
them to their fate unless something alarms them.
  
“On one occasion Mr. Kipp, of the American Fur
Company, caught eleven calves, their dams all the
time standing near the top of the bank. Frequently,
however, the cows leave the young to their fate, when
most of them perish. In connection with this
part of the subject, we may add that we were informed,
when on the Upper Missouri River, that when the banks
of that river were practicable for cows, and their
calves could not follow them, they went down again,
after having gained the top, and would remain by them
until forced away by the cravings of hunger. When
thus forced by the necessity of saving themselves to
quit their young, they seldom, if ever, return to
them. When a large herd of these wild animals
are crossing a river, the calves or yearlings manage
to get on the backs of the cows, and are thus conveyed
safely over.”
  
5. *The Yearling.*—­During the first
five months of his life, the calf changes its coat
completely, and becomes in appearance a totally different
animal. By the time he is six months old he has
taken on all the colors which distinguish him in after
life, excepting that upon his fore quarters.
The hair on the head has started out to attain the
luxuriant length and density which is so conspicuous
in the adult, and its general color is a rich dark
brown, shading to black under the chin and throat.
The fringe under the neck is long, straight, and black,
and the under parts, the back of the fore arm, the
outside of thigh, and the tail-tuft are all black.
  
The color of the shoulder, the side, and upper part
of the hind quarter is a peculiar smoky brown ("broccoli
brown” of Ridgway), having in connection with
the darker browns of the other parts a peculiar faded
appearance, quite as if it were due to the bleaching
power of the sun. On the fore quarters there
is none of the bright straw color so characteristic
of the adult animal. Along the top of the neck
and shoulders, however, this color has at last begun
to show faintly. The hair on the body is quite
luxuriant, both in length and density, in both respects
quite equaling, if not even surpassing, that of the
finest adults. For example, the hair on the side
of the mounted yearling in the Museum group has a
length of 2 to 21/2 inches, while that on the same
region of the adult bull, whose pelage is particularly
fine, is recorded as being 2 inches only.
  
The horn is a straight, conical spike from 4 to 6
inches long, according to age, and perfectly black.
The legs are proportionally longer and larger in the
joints than those of the full-grown animal. The
countenance of the yearling is quite interesting.
The sleepy, helpless, innocent expression of the very
young calf has given place to a wide-awake, mischievous
look, and he seems ready to break away and run at
a second’s notice.

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The measurements of the yearling in the Museum group
are as follows:
+------------------------------------------------------  
----------+
|BISON AMERICANUS. (Male yearling, taken Oct. 31, 1886. Montana.)|
+-----------------------------------------------------------  
-----+
| (*No. 15694, National Museum collection.*) |
+-----------------------------------------------------------  
-----+
| | Feet.| Inches. |
|Height at shoulders | 3 | 5 |
|Length, head and body to insertion of tail | 5 | |
|Depth of chest | 1 | 11 |
|Depth of flank | 1 | 1 |
|Girth behind fore leg | 4 | 3 |
|From base of horns around end of nose | 2 | 11/2 |
|Length of tail vertebræ | | 10 |
+-----------------------------------------------------------  
-----+
  
6. *The Spike Bull.*—­In hunters’
parlance, the male buffalo between the “yearling”
age and four years is called a “spike”
bull, in recognition of the fact that up to the latter
period the horn is a spike, either perfectly straight,
or with a curve near its base, and a straight point
the rest of the way up. The curve of the horn
is generally hidden in the hair, and the only part
visible is the straight, terminal spike. Usually
the spike points diverge from each other, but often
they are parallel, and also perpendicular. In
the fourth year, however, the points of the horns
begin to curve inward toward each other, describing
equal arcs of the same circle, as if they were going
to meet over the top of the head.
  
In the handsome young “spike” bull in
the Museum group, the hair on the shoulders has begun
to take on the length, the light color, and tufted
appearance of the adult, beginning at the highest point
of the hump and gradually spreading. Immediately
back of this light patch the hair is long, but dark
and woolly in appearance. The leg tufts have doubled
in length, and reveal the character of the growth
that may be finally expected. The beard has greatly
lengthened, as also has the hair upon the bridge of
the nose, the forehead, ears, jaws, and all other portions
of the head except the cheeks.
  
The “spike” period of a buffalo is a most
interesting one. Like a seventeen-year-old boy,
the young bull shows his youth in so many ways it
is always conspicuous, and his countenance is so suggestive
of a half-bearded youth it fixes the interest to a
marked degree. He is active, alert, and suspicious,
and when he makes up his mind to run the hunter may
as well give up the chase.
  
By a strange fatality, our spike bull appears to be
the only one in any museum, or even in preserved existence,
as far as can be ascertained. Out of the twenty-five
buffaloes killed and preserved by the Smithsonian
expedition, ten of which were adult bulls, this specimen
was the only male between the yearling and the adult
ages. An effort to procure another entire specimen
of this age from Texas yielded only two spike heads.
It is to be sincerely regretted that more specimens
representing this very interesting period of the buffalo’s
life have not been preserved, for it is now too late
to procure wild specimens.

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The following are the post-mortem dimensions of our
specimen:
+------------------------------------------------------  
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| BISON AMERICANUS. |
+-----------------------------------------------------------  
----+
|("Spike” bull, two years old; taken October 14, 1886. Montana.)|
+-----------------------------------------------------------  
----+
| (*No. 15685, National Museum collection.*) |
+-----------------------------------------------------------  
----+
| | Feet.| Inches. |
|Height at shoulders | 4 | 2 |
|Length, head and body to insertion of tail | 7 | 7 |
|Depth of chest | 2 | 3 |
|Depth of flank | 1 | 7 |
|Girth behind fore leg | 6 | 8 |
|From base of horns around end of nose | 2 | 81/2 |
|Length of tail vertebræ | 1 | |
+-----------------------------------------------------------  
----+
  
7. *The Adult Bull.*—­In attempting
to describe the adult male in the National Museum
group, it is difficult to decide which feature is most
prominent, the massive, magnificent head, with its
shaggy frontlet and luxuriant black beard, or the
lofty hump, with its showy covering of straw-yellow
hair, in thickly-growing locks 4 inches long.
But the head is irresistible in its claims to precedence.
  
[Illustration: SPIKE BULL. From the group
in the National Museum. Reproduced from the *Cosmopolitan
Magazine*, by permission of the publishers.]
  
It must be observed at this point that in many respects
this animal is an exceptionally fine one. In
actual size of frame, and in quantity and quality
of pelage, it is far superior to the average, even
of wild buffaloes when they were most numerous and
at their best.[30] In one respect, however, that of
actual bulk, it is believed that this specimen may
have often been surpassed. When buffaloes were
numerous, and not required to do any great amount
of running in order to exist, they were, in the autumn
months, very fat. Audubon says: “A
large bison bull will generally weigh nearly 2,000
pounds, and a fat cow about 1,200 pounds. We
weighed one of the bulls killed by our party, and found
it to reach 1,727 pounds, although it had already
lost a good deal of blood. This was an old bull,
and not fat. It had probably weighed more at some
previous period."[31] Our specimen when killed (by
the writer, December 6, 1886) was in full vigor, superbly
muscled, and well fed, but he carried not a single
pound of fat. For years the never-ceasing race
for life had utterly prevented the secretion of useless
and cumbersome fat, and his “subsistence”
had gone toward the development of useful muscle.
Having no means by which to weigh him, we could only
estimate his weight, in which I called for the advice
of my cowboys, all of whom were more or less familiar
with the weight of range cattle, and one I regarded
as an expert. At first the estimated weight of
the animal was fixed at 1,700 pounds, but with a constitutional
fear of estimating over the truth, I afterward reduced
it to 1,600 pounds. This I am now well convinced
was an error, for I believe the first figure to have
been nearer the truth.

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[Note 30: In testimony whereof the following
extract from a letter written by General Stewart Van
Vliet, on March 10, 1897, to Professor Baird, is of
interest:
  
“MY DEAR PROFESSOR: On the receipt of your
letter of the 6th instant I saw General Sheridan,
and yesterday we called on your taxidermist and examined
the buffalo bull he is setting up for the Museum.
I don’t think I have ever seen a more splendid
specimen in my life. General Sheridan and I have
seen millions of buffalo on the plains in former times.
I have killed hundreds, but I never killed a larger
animal than the one in the possession of your taxidermist.”]
  
[Note 31: Quadrupeds of North America, vol.
II, p. 44.]
  
In mounting the skin of this animal, we endeavored
by every means in our power, foremost of which were
three different sets of measurements, taken from the
dead animal, one set to check another, to reproduce
him when mounted in exactly the same form he possessed
in life—­muscular, but not fat.
  
The color of the body and hindquarters of a buffalo
is very peculiar, and almost baffles intelligent description.
Audubon calls it “between a dark umber and liver-shining
brown.” I once saw a competent artist experiment
with his oil-colors for a quarter of an hour before
he finally struck the combination which exactly matched
the side of our large bull. To my eyes, the color
is a pale gray-brown or smoky gray. The range
of individual variation is considerable, some being
uniformly darker than the average type, and others
lighter. While the under parts of most adults
are dark brown or blackish brown, others are actually
black. The hair on the body and hinder parts is
fine, wavy on the outside, and woolly underneath,
and very dense. Add to this the thickness of
the skin itself, and the combination forms a covering
that is almost impervious to cold.
  
The entire fore quarter region, *e. g.*, the
shoulders, the hump, and the upper part of the neck,
is covered with a luxuriant growth of pale yellow
hair (Naples yellow + yellow ocher), which stands straight
out in a dense mass, disposed in handsome tufts.
The hair is somewhat woolly in its nature, and the
ends are as even as if the whole mass had lately been
gone over with shears and carefully clipped. This
hair is 4 inches in length. As the living animal
moved his head from side to side, the hair parted
in great vertical furrows, so deep that the skin itself
seemed almost in sight. As before remarked, to
comb this hair would utterly destroy its naturalness,
and it should never be done under any circumstances.
Standing as it does between the darker hair of the
body on one side and the almost black mass of the
head on the other, this light area is rendered doubly
striking and conspicuous by contrast. It not
only covers the shoulders, but extends back upon the
thorax, where it abruptly terminates on a line corresponding
to the sixth rib.
  
From the shoulder-joint downward, the color shades
gradually into a dark brown until at the knee it becomes
quite black. The huge fore-arm is lost in a thick
mass of long, coarse, and rather straight hair 10 inches
in length. This growth stops abruptly at the knee,
but it hangs within 6 inches of the hoof. The
front side of this mass is blackish brown, but it
rapidly shades backward and downward into jet-black.

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The hair on the top of the head lies in a dense, matted
mass, forming a perfect crown of rich brown (burnt
sienna) locks, 16 inches in length, hanging over the
eyes, almost enveloping both horns, and spreading back
in rich, dark masses upon the light-colored neck.
  
On the cheeks the hair is of the same blackish brown
color, but comparatively short, and lies in beautiful
waves. On the bridge of the nose the hair is
about 6 inches in length and stands out in a thick,
uniform, very curly mass, which always looks as if
it had just been carefully combed.
  
Immediately around the nose and mouth the hair is
very short, straight and stiff, and lies close to
the skin, which leaves the nostrils and lips fully
exposed. The front part of the chin is similarly
clad, and its form is perfectly flat, due to the habit
of the animal in feeding upon the short, crisp buffalo
grass, in the course of which the chin is pressed
flat against the ground. The end of the muzzle
is very massive, measuring 2 feet 2 inches in circumference
just back of the nostrils.
  
The hair of the chin-beard is coarse, perfectly straight,
jet black, and 111/2 inches in length on our old bull.
  
Occasionally a bull is met with who is a genuine Esau
amongst his kind. I once saw a bull, of medium
size but fully adult, whose hair was a wonder to behold.
I have now in my possession a small lock of hair which
I plucked from his forehead, and its length is 221/2
inches. His horns were entirely concealed by
the immense mass of long hair that nature had piled
upon his head, and his beard was as luxuriant as his
frontlet.
  
[Illustration: BULL BUFFALO IN NATIONAL MUSEUM
GROUP. Drawn by Ernest E. Thompson.]
  
The nostril opening is large and wide. The color
of the hairless portions of the nose and mouth is
shiny Vandyke brown and black, with a strong tinge
of bluish-purple, but this latter tint is not noticeable
save upon close examination, and the eyelid is the
same. The iris is of an irregular pear-shaped
outline, 1-5/16 inches in its longest diameter, very
dark, reddish brown in color, with a black edging all
around it. Ordinarily no portion of the white
eyeball is visible, but the broad black band surrounding
the iris, and a corner patch of white, is frequently
shown by the turning of the eye. The tongue is
bluish purple, as are the lips inside.
  
The hoofs and horns are, in reality, jet black throughout,
but the horn often has at the base a scaly, dead appearance
on the outside, and as the wrinkles around the base
increase with age and scale up and gather dirt, that
part looks gray. The horns of bulls taken in their
prime are smooth, glossy black, and even look as if
they had been half polished with oil.
  
As the bull increases in age, the outer layers of
the horn begin to break off at the tip and pile up
one upon another, until the horn has become a thick,
blunt stub, with only the tip of what was once a neat
and shapely point showing at the end. The bull
is then known as a “stub-horn,” and his
horns increase in roughness and unsightliness as he
grows older. From long rubbing on the earth, the
outer curve of each horn is gradually worn flat, which
still further mars its symmetry.

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The horns serve as a fair index of the age of a bison.
After he is three years old, the bison adds each year
a ring around the base of his horns, the same as domestic
cattle. If we may judge by this, the horn begins
to break when the bison is about ten or eleven years
old, and the stubbing process gradually continues
during the rest of his life. Judging by the teeth,
and also the oldest horns I have seen, I am of the
opinion that the natural life time of the bison is
about twenty-five years; certainly no less.
+------------------------------------------------------  
--+
| BISON AMERICANUS. |
| (Male, eleven years old. |
| Taken December 6, 1866. Montana.) |
| (*No. 15703, National Museum collection.*) |
+--------------------------------------------------------+
| |Feet.|Inches.|
|Height at shoulders to the skin | 5 | 8 |
|Height at shoulders to top of hair | 6 | -- |
|Length, head and body to insertion of tail| 10 | 2 |
|Depth of chest | 3 | 10 |
|Depth of flank | 2 | 0 |
|Girth behind fore leg | 8 | 4 |
|From base of horns around end of nose | 3 | 6 |
|Length of tail vertebræ | 1 | 3 |
|Circumference of muzzle back of nostrils | 2 | 2 |
+--------------------------------------------------------+  
pre>
  
8. *The Cow in the third year.*—­The
young cow of course possesses the same youthful appearance
already referred to as characterizing the “spike”
bull. The hair on the shoulders has begun to take
on the light straw-color, and has by this time attained
a length which causes it to arrange itself in tufts,
or locks. The body colors have grown darker,
and reached their permanent tone. Of course the
hair on the head has by no means attained its full
length, and the head is not at all handsome.
  
The horns are quite small, but the curve is well defined,
and they distinctly mark the sex of the individual,
even at the beginning of the third year.
+------------------------------------------------------  
------+
| BISON AMERICANUS. |
|(Young cow, in third year. Taken October 14, 1886. Montana.)|
+-----------------------------------------------------------  
-+
| (*No. 15686, National Museum collection.*) |
+-----------------------------------------------------------  
-+
| |Feet.| Inches. |
|Height at shoulders | 4 | 5 |
|Length, head and body to insertion of tail| 7 | 7 |
|Depth of chest | 2 | 4 |
|Depth of flank | 1 | 4 |
|Girth behind fore leg | 5 | 4 |
|From base of horns around end of nose | 2 | 81/2 |  
9. *The adult Cow.*—­The upper body
color of the adult cow in the National Museum group
(see Plate) is a rich, though not intense, Vandyke
brown, shading imperceptibly down the sides into black,
which spreads over the entire under parts and inside
of the thighs. The hair on the lower joints of
the leg is in turn lighter, being about the same shade
as that on the loins. The fore-arm is concealed
in a mass of almost black hair, which gradually shades
lighter from the elbow upward and along the whole
region of the humerus. On the shoulder itself
the hair is pale yellow or straw-color (Naples yellow
+ yellow ocher), which extends down in a point toward
the elbow. From the back of the head a conspicuous
baud of curly, dark-brown hair extends back like a
mane along the neck and to the top of the hump, beyond
which it soon fades out.
  
The hair on the head is everywhere a rich burnt-sienna
brown, except around the corners of the mouth, where
it shades into black.
  
The horns of the cow bison are slender, but solid
for about two-thirds of their length from the tip,
ringed with age near their base, and quite black.
Very often they are imperfect in shape, and out of
every five pairs at least one is generally misshapen.
Usually one horn is “crumpled,” *e.
g.*, dwarfed in length and unnaturally thickened
at the base, and very often one horn is found to be
merely an unsightly, misshapen stub.
  
[Illustration: From a photograph. Engraved
by Frederick Juengling. BULL BUFFALO. (REAR VIEW.)
Reproduced from the *Cosmopolitan Magazine*, by
permission of the publishers.]
  
The udder of the cow bison is very small, as might
be expected of an animal which must do a great deal
of hard traveling, but the milk is said to be very
rich. Some authorities declare that it requires
the milk of two domestic cows to satisfy one buffalo
calf, but this, I think, is an error. Our calf
began in May to consume 6 quarts of domestic milk
daily, which by June 10 had increased to 8, and up
to July 10, 9 quarts was the utmost it could drink.
By that time it began to eat grass, but the quantity
of milk disposed of remained about the same.
+------------------------------------------------------  
---------+
| BISON AMERICANUS. |
|(Adult cow, eight years old. Taken November 18, 1886. Montana.)|
+-----------------------------------------------------------  
----+
| (*No. 15767, National Museum collection.*) |
+-----------------------------------------------------------  
----+
| | Feet.| Inches. |
|Height at shoulders | 4 | 10 |
|Length, head and body to insertion of tail| 8 | 6 |
|Depth of chest | 3 | 7 |  
10. *The “Wood,” or “Mountain”
Buffalo.*—­Having myself never seen a
specimen of the so called “mountain buffalo”
or “wood buffalo,” which some writers
accord the rank of a distinct variety, I can only quote
the descriptions of others. While most Rocky
Mountain hunters consider the bison of the mountains
quite distinct from that of the plains, it must be
remarked that no two authorities quite agree in regard
to the distinguishing characters of the variety they
recognize. Colonel Dodge states that “His
body is lighter, whilst his legs are shorter, but much
thicker and stronger, than the plains animal, thus
enabling him to perform feats of climbing and tumbling
almost incredible in such a huge and unwieldy beast."[32]
  
[Note 32: Plains of the Great West, p. 144.]
  
The belief in the existence of a distinct mountain
variety is quite common amongst hunters and frontiersmen
all along the eastern slope the Rocky Mountains as
far north as the Peace River. In this connection
the following from Professor Henry Youle Hind[33]
is of general interest:
  
[Note 33: Red River, Assinniboine and Saskatchewan
Expedition, II p. 104-105.]
  
“The existence of two kinds of buffalo is firmly
believed by many hunters at Red River; they are stated
to be the prairie buffalo and the buffalo of the woods.
Many old hunters with whom I have conversed on this
subject aver that the so-called wood buffalo is a distinct
species, and although they are not able to offer scientific
proofs, yet the difference in size, color, hair, and
horns, are enumerated as the evidence upon which they
base their statement. Men from their youth familiar
with these animals in the great plains, and the varieties
which are frequently met with in large herds, still
cling to this opinion. The buffalo of the plains
are not always of the dark and rich bright brown which
forms their characteristic color. They are sometimes
seen from white to almost black, and a gray buffalo
is not at all uncommon. Buffalo emasculated by
wolves are often found on the prairies, where they
grow to an immense size; the skin of the buffalo ox
is recognized by the shortness of the wool and by
its large dimensions. The skin of the so-called
wood buffalo is much larger than that of the common
animal, the hair is very short, mane or hair about
the neck short and soft, and altogether destitute
of curl, which is the common feature in the hair or
wool of the prairie animal. Two skins of the so-called
wood buffalo, which I saw at Selkirk Settlement, bore
a very close resemblance to the skin of the Lithuanian
bison, judging from the specimens of that species
which I have since had an opportunity of seeing in
the British Museum.

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“The wood buffalo is stated to be very scarce,
and only found north of the Saskatchewan and on the
flanks of the Rocky Mountains. It never ventures
into the open plains. The prairie buffalo, on
the contrary, generally avoids the woods in summer
and keeps to the open country; but in winter they
are frequently found in the woods of the Little Souris,
Saskatchewan, the Touchwood Hills, and the aspen groves
on the Qu’Appelle. There is no doubt that
formerly the prairie buffalo ranged through open woods
almost as much as he now does through the prairies.”
  
Mr. Harrison S. Young, an officer of the Hudson’s
Bay Fur Company, stationed at Fort Edmonton, writes
me as follows in a letter dated October 22, 1887:
“In our district of Athabasca, along the Salt
River, there are still a few wood buffalo killed every
year; but they are fast diminishing in numbers, and
are also becoming very shy.”
  
In Prof. John Macoun’s “Manitoba
and the Great Northwest,” page 342, there occurs
the following reference to the wood buffalo: “In
the winter of 1870 the last buffalo were killed north
of Peace River; but in 1875 about one thousand head
were still in existence between the Athabasca and
Peace Rivers, north of Little Slave Lake. These
are called wood buffalo by the hunters, but diner
only in size from those of the plain.”
  
In the absence of facts based on personal observations,
I may be permitted to advance an opinion in regard
to the wood buffalo. There is some reason for
the belief that certain changes of form may have taken
place in the buffaloes that have taken up a permanent
residence in rugged and precipitous mountain regions.
Indeed, it is hardly possible to understand how such
a radical change in the habitat of an animal could
fail, through successive generations, to effect certain
changes in the animal itself. It seems to me
that the changes which would take place in a band
of plains buffaloes transferred to a permanent mountain
habitat can be forecast with a marked degree of certainty.
The changes that take place under such conditions
in cattle, swine, and goats are well known, and similar
causes would certainly produce similar results in
the buffalo.
  
The scantier feed of the mountains, and the great
waste of vital energy called for in procuring it,
would hardly produce a larger buffalo than the plains-fed
animal, who acquires an abundance of daily food of
the best quality with but little effort.
  
We should expect to see the mountain buffalo smaller
in body than the plains animal, with better leg development,
and particularly with stronger hind quarters.
The pelvis of the plains buffalo is surprisingly small
and weak for so large an animal. Beyond question,
constant mountain climbing is bound to develop a maximum
of useful muscle and bone and a minimum of useless
fat. If the loss of mane sustained by the African
lions who live in bushy localities may be taken as
an index, we should expect the bison of the mountains,

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especially the “wood buffalo,” to lose
a great deal of his shaggy frontlet and mane on the
bushes and trees which surrounded him. Therefore,
we would naturally expect to find the hair on those
parts shorter and in far less perfect condition than
on the bison of the treeless prairies. By reason
of the more shaded condition of his home, and the
decided mitigation of the sun’s fierceness,
we should also expect to see his entire pelage of a
darker tone. That he would acquire a degree of
agility and strength unknown in his relative of the
plain is reasonably certain. In the course of
many centuries the change in his form might become
well defined, constant, and conspicuous; but at present
there is apparently not the slightest ground for considering
that the “mountain buffalo” or “wood
buffalo” is entitled to rank even as a variety
of *Bison americanus*.
  
Colonel Dodge has recorded some very interesting information
in regard to the “mountain, or wood buffalo,”
which deserves to be quoted entire.[34]
  
[Note 34: Plains of the Great West, p. 144-147.]
  
“In various portions of the Rocky Mountains,
especially in the region of the parks, is found an
animal which old mountaineers call the ‘bison.’
This animal bears about the same relation to a plains
buffalo as a sturdy mountain pony does to an American
horse. His body is lighter, whilst his legs are
shorter, but much thicker and stronger, than the plains
animal, thus enabling him to perform feats of climbing
and tumbling almost incredible in such a huge and
apparently unwieldy beast.
  
“These animals are by no means plentiful, and
are moreover excessively shy, inhabiting the deepest,
darkest defiles, or the craggy, almost precipitous,
sides of mountains inaccessible to any but the most
practiced mountaineers.
  
“From the tops of the mountains which rim the
parks the rains of ages have cut deep gorges, which
plunge with brusque abruptness, but nevertheless with
great regularity, hundreds or even thousands of feet
to the valley below. Down the bottom of each such
gorge a clear, cold stream of purest water, fertilizing
a narrow belt of a few feet of alluvial, and giving
birth and growth, to a dense jungle of spruce, quaking
asp, and other mountain trees. One side of the
gorge is generally a thick forest of pine, while the
other side is a meadow-like park, covered with splendid
grass. Such gorges are the favorite haunt of
the mountain buffalo. Early in the morning he
enjoys a bountiful breakfast of the rich nutritious
grasses, quenches his thirst with the finest water,
and, retiring just within the line of jungle, where,
himself unseen, he can scan the open, he crouches himself
in the long grass and reposes in comfort and security
until appetite calls him to his dinner late in the
evening. Unlike their plains relative, there is
no stupid staring at an intruder. At the first
symptom of danger they disappear like magic in the
thicket, and never stop until far removed from even
the apprehension of pursuit. I have many times
come upon their fresh tracks, upon the beds from which
they had first sprung in alarm, but I have never even
seen one.

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“I have wasted much time and a great deal of
wind in vain endeavors to add one of these animals
to my bag. My figure is no longer adapted to
mountain climbing, and the possession of a bison’s
head of my own killing is one of my blighted hopes.
  
“Several of my friends have been more fortunate,
but I know of no sportsman who has bagged more than
one.[35]
  
[Note 35: Foot-note by William Blackmore:
“The author is in error here, as in a point
of the Tarryall range of mountains, between Pike’s
Peak and the South Park, in the autumn of 1871, two
mountain buffaloes were killed in one afternoon.
The skin of the finer was presented to Dr. Frank Buckland.”]
  
“Old mountaineers and trappers have given me
wonderful accounts of the number of these animals
in all the mountain region ‘many years ago;’
and I have been informed by them, that their present
rarity is due to the great snow-storm of 1844-’45,
of which I have already spoken as destroying the plains
buffalo in the Laramie country.
  
“One of my friends, a most ardent and pertinacious
sportsman, determined on the possession of a bison’s
head, and, hiring a guide, plunged into the mountain
wilds which separate the Middle from South Park.
After several days fresh tracks were discovered.
Turning their horses loose on a little gorge park,
such as described, they started on foot on the trail;
for all that day they toiled and scrambled with the
utmost caution—­now up, now down, through
deep and narrow gorges and pine thickets, over bare
and rocky crags, sleeping where night overtook them.
Betimes next morning they pushed on the trail, and
about 11 o’clock, when both were exhausted and
well-nigh disheartened, their route was intercepted
by a precipice. Looking over, they descried, on
a projecting ledge several hundred feet below, a herd
of about 20 bisons lying down. The ledge was
about 300 feet at widest, by probably 1,000 feet long.
Its inner boundary was the wall of rock on the top
of which they stood; its outer appeared to be a sheer
precipice of at least 200 feet. This ledge was
connected with the slope of the mountain by a narrow
neck. The wind being right, the hunters succeeded
in reaching this neck unobserved. My friend selected
a magnificent head, that of a fine bull, young but
full grown, and both fired. At the report the
bisons all ran to the far end of the ledge and plunged
over.
  
“Terribly disappointed, the hunters ran to the
spot, and found that they had gone down a declivity,
not actually a precipice, but so steep that the hunters
could not follow them.
  
“At the foot lay a bison. A long, a fatiguing
detour brought them to the spot, and in the animal
lying dead before him my friend recognized his bull—­his
first and last mountain buffalo. Hone but a true
sportsman can appreciate his feelings.
  
“The remainder of the herd was never seen after
the great plunge, down which it is doubtful if even
a dog could have followed unharmed.”

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In the issue of Forest and Stream of June 14, 1888,
Dr. R. W. Shufeldt, in an article entitled “The
American Buffalo,” relates a very interesting
experience with buffaloes which were pronounced to
be of the “mountain” variety, and his
observations on the animals are well worth reproducing
here. The animals (eight in number) were encountered
on the northern slope of the Big Horn Mountains, in
the autumn of 1877. “We came upon them
during a fearful blizzard of heavy hail, during which
our animals could scarcely retain their feet.
In fact, the packer’s mule absolutely lay down
on the ground rather than risk being blown down the
mountain side, and my own horse, totally unable to
face such a violent blow and the pelting hail (the
stones being as large as big marbles), positively
stood stock-still, facing an old buffalo bull that
was not more than 25 feet in front of me. \* \* \* Strange
to say, this fearful gust did not last more than ten
minutes, when it stopped as suddenly as it had commenced,
and I deliberately killed my old buffalo at one shot,
just where he stood, and, separating two other bulls
from the rest, charged them down a rugged ravine.
They passed over this and into another one, but with
less precipitous sides and no trees in the way, and
when I was on top of the intervening ridge I noticed
that the largest bull had halted in the bottom.
Checking my horse, an excellent buffalo hunter, I
fired down at him without dismounting. The ball
merely barked his shoulder, and to my infinite surprise
he turned and charged me up the hill. \* \* \* Stepping
to one side of my horse, with the charging and infuriated
bull not 10 feet to my front, I fired upon him, and
the heavy ball took him square in the chest, bringing
him to his knees, with a gush of scarlet blood from
his mouth and nostrils. \* \* \*
  
“Upon examining the specimen, I found it to
be an old bull, apparently smaller and very much blacker
than the ones I had seen killed on the plains only
a day or so before. Then I examined the first
one I had shot, as well as others which were killed
by the packer from the same bunch, and I came to the
conclusion that they were typical representatives
of the variety known as the ‘mountain buffalo,’
a form much more active in movement, of slighter limbs,
blacker, and far more dangerous to attack. My
opinion in the premises remains unaltered to-day.
In all this I may be mistaken, but it was also the
opinion held by the old buffalo hunter who accompanied
me, and who at once remarked when he saw them that
they were ‘mountain buffalo,’ and not the
plains variety. \* \* \*
  
“These specimens were not actually measured
by me in either case, and their being considered smaller
only rested upon my judging them by my eye. But
they were of a softer pelage, black, lighter in limb,
and when discovered were in the timber, on the side
of the Big Horn Mountains.”
  
The band of bison in the Yellowstone Park must, of
necessity, be of the so-called “wood”
or “mountain” variety, and if by any chance
one of its members ever dies of old age, it is to
be hoped its skin may be carefully preserved and sent
to the National Museum to throw some further light
on this question.

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11. *The shedding of the winter pelage.*—­In
personal appearance the buffalo is subject to striking,
and even painful, variations, and the estimate an
observer forms of him is very apt to depend upon the
time of the year at which the observation is made.
Toward the end of the winter the whole coat has become
faded and bleached by the action of the sun, wind,
snow, and rain, until the freshness of its late autumn
colors has totally disappeared. The bison takes
on a seedy, weathered, and rusty look. But this
is not a circumstance to what happens to him a little
later. Promptly with the coming of the spring,
if not even in the last week of February, the buffalo
begins the shedding of his winter coat. It is
a long and difficult task, and with commendable energy
he sets about it at the earliest possible moment.
It lasts him more than half the year, and is attended
with many positive discomforts.
  
The process of shedding is accomplished in two ways:
by the new hair growing into and forcing off the old,
and by the old hair falling off in great patches,
leaving the skin bare. On the heavily-haired
portions—­the head, neck, fore quarters,
and hump—­the old hair stops growing, dies,
and the new hair immediately starts through the skin
and forces it off. The new hair grows so rapidly,
and at the same time so densely, that it forces itself
into the old, becomes hopelessly entangled with it,
and in time actually lifts the old hair clear of the
skin. On the head the new hair is dark brown or
black, but on the neck, fore quarters, and hump it
has at first, and indeed until it is 2 inches in length,
a peculiar gray or drab color, mixed with brown, totally
different from its final and natural color. The
new hair starts first on the head, but the actual
shedding of the old hair is to be seen first along
the lower parts of the neck and between the fore legs.
The heavily-haired parts are never bare, but, on the
contrary, the amount of hair upon them is about the
same all the year round. The old and the new
hair cling together with provoking tenacity long after
the old coat should fall, and on several of the bulls
we killed in October there were patches of it still
sticking tightly to the shoulders, from which it had
to be forcibly plucked away. Under all such patches
the new hair was of a different color from that around
them.
  
The other process of shedding takes place on the body
and hind quarters, from which the old hair loosens
and drops off in great woolly flakes a foot square,
more or less. The shedding takes place very unevenly,
the old hair remaining much longer in some places
than in others. During April, May, and June the
body and hind quarters present a most ludicrous and
even pitiful spectacle. The island-like patches
of persistent old hair alternating with patches of
bare brown skin are adorned (?) by great ragged streamers
of loose hair, which flutter in the wind like signals
of distress. Whoever sees a bison at this period

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is filled with a desire to assist nature by plucking
off the flying streamers of old hair; but the bison
never permits anything of the kind, however good one’s
intentions may be. All efforts to dislodge the
old hair are resisted to the last extremity, and the
buffalo generally acts as if the intention were to
deprive him of his skin itself. By the end of
June, if not before, the body and hind quarters are
free from the old hair, and as bare as the hide of
a hippopotamus. The naked skin has a shiny brown
appearance, and of course the external anatomy of the
animal is very distinctly revealed. But for the
long hair on the fore quarters, neck, and head the
bison would lose all his dignity of appearance with
his hair. As it is, the handsome black head,
which is black with new hair as early as the first
of May, redeems the animal from utter homeliness.
  
After the shedding of the body hair, the naked skin
of the buffalo is burned by the sun and bitten by
flies until he is compelled to seek a pool of water,
or even a bed of soft mud, in which to roll and make
himself comfortable. He wallows, not so much because
he is so fond of either water or mud, but in self-defense;
and when he emerges from his wallow, plastered with
mud from head to tail, his degradation is complete.
He is then simply not fit to be seen, even by his best
friends.
  
By the first of October, a complete and wonderful
transformation has taken place. The buffalo stands
forth clothed in a complete new suit of hair, fine,
clean, sleek, and bright in color, not a speck of dirt
nor a lock awry anywhere. To be sure, it is as
yet a trifle short on the body, where it is not over
an inch in length, and hardly that; but it is growing
rapidly and getting ready for winter.
  
From the 20th of November to the 20th of December
the pelage is at its very finest. By the former
date it has attained its full growth, its colors are
at their brightest, and nothing has been lost either
by the elements or by accidental causes. To him
who sees an adult bull at this period, or near it,
the grandeur of the animal is irresistibly felt.
After seeing buffaloes of all ages in the spring and
summer months the contrast afforded by those seen
in October, November, and December was most striking
and impressive. In the later period, as different
individuals were wounded and brought to bay at close
quarters, their hair was so clean and well-kept, that
more than once I was led to exclaim: “He
looks as if he had just been combed.”
  
It must be remarked, however, that the long hair of
the head and fore quarters is disposed in locks or
tufts, and to comb it in reality would utterly destroy
its natural and characteristic appearance.
  
Inasmuch as the pelage of the domesticated bison,
the only representatives of the species which will
be found alive ten years hence, will in all likelihood
develop differently from that of the wild animal,
it may some time in the future be of interest to know
the length, by careful measurement, of the hair found
on carefully-selected typical wild specimens.
To this end the following measurements are given.
It must be borne in mind that these specimens were
not chosen because their pelage was particularly luxuriant,
but rather because they are fine average specimens.

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The hair of the adult bull is by no means as long
as I have seen on a bison, although perhaps not many
have greatly surpassed it. It is with the lower
animals as with man—­the length of the hairy
covering is an individual character only. I have
in my possession a tuft of hair, from the frontlet
of a rather small bull bison, which measures 221/2
inches in length. The beard on the specimen from
which this came was correspondingly long, and the
entire pelage was of wonderful length and density.
  
LENGTH OF THE HAIR OF BISON AMERICANUS.
  
[Measurements, in inches, of the pelage of the specimens
composing the group in the National Museum.]
+------------------------------------------------------  
-----------------+
| |Old |Old |Spike |Young |Yearling|Young |
| |bull, |cow, |bull, |cow, |calf, |calf, |
| |killed |killed |killed |killed |killed |four |
| |Dec. 6.|Nov. 18.|Oct. 14.|Oct. 14.|Oct. 31.|months|
|Length of: | | | | | |old. |
+--------------------+-------+--------+--------+--------+---  
-----+------+
|hair on the shoulder| | | | | | |
|(over scapula) | 33/4 | 43/4 | 31/2 | 31/4 | 3 | 11/2 |
+--------------------+-------+--------+--------+--------+---  
-----+------+
|hair on top of hump | 61/2 | 7 | 51/4 | 51/2 | 41/2 | 2 |
+--------------------+-------+--------+--------+--------+---  
-----+------+
|hair on the middle | | | | | | |
|of the side | 2 | 11/2 | 21/2 | 11/2 | 21/4 | 11/4 |
+--------------------+-------+--------+--------+--------+---  
-----+------+
|hair on the | | | | | | |
|hind quarter | 13/4 | 11/4 | 3/4 | 3/4 | 2 | 1 |
+--------------------+-------+--------+--------+--------+---  
-----+------+
|hair on the | | | | | | |
|forehead | 16 | 81/2 | 61/2 | 5 | 31/2 | 1/2 |
+--------------------+-------+--------+--------+--------+---  
-----+------+
|the chin beard | 111/2 | 91/2 | 63/4 | 5 | 5 | 0 |
+--------------------+-------+--------+--------+--------+---  
-----+------+
|the breast tuft | 8 | 81/2 | 8 | 6 | 5 | 3 |
+--------------------+-------+--------+--------+--------+---  
-----+------+
|tuft on fore leg | 101/2 | 8 | 8 | 41/2 | 3 | 11/2 |
+--------------------+-------+--------+--------+--------+---  
-----+------+
|the tail tuft | 19 | 15 | 15 | 13 | 71/2 | 41/2 |
+-----------------------------------------------------------  
------------+
 *Albinism.*—­Cases of albinism in the
buffalo were of extremely rare occurrence. I
have met many old buffalo hunters, who had killed

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thousands and seen scores of thousands of buffaloes,
yet never had seen a white one. From all accounts
it appears that not over ten or eleven white buffaloes,
or white buffalo skins, were ever seen by white men.
Pied individuals were occasionally obtained, but even
they were rare. Albino buffaloes were always
so highly prized that not a single one, so far as
I can learn, ever had the good fortune to attain adult
size, their appearance being so striking, in contrast
with the other members of the herd, as to draw upon
them an unusual number of enemies, and cause their
speedy destruction.
  
At the New Orleans Exposition, in 1884-’85,
the Territory of Dakota exhibited, amongst other Western
quadrupeds, the mounted skin of a two-year-old buffalo
which might fairly be called an albino. Although
not really white, it was of a uniform dirty cream-color,
and showed not a trace of the bison’s normal
color on any part of its body.
  
Lieut. Col. S. C. Kellogg, U. S. Army, has
on deposit in the National Museum a tanned skin which
is said to have come from a buffalo. It is from
an animal about one year old, and the hair upon it,
which is short, very curly or wavy, and rather coarse,
is pure white. In length and texture the hair
does not in any one respect resemble the hair of a
yearling buffalo save in one particular,—­along
the median line of the neck and hump there is a rather
long, thin mane of hair, which has the peculiar woolly
appearance of genuine buffalo hair on those parts.
On the shoulder portions of the skin the hair is as
short as on the hind quarters. I am inclined
to believe this rather remarkable specimen came from
a wild half-breed calf, the result of a cross between
a white domestic cow and a buffalo bull. At one
time it was by no means uncommon for small bunches
of domestic cattle to enter herds of buffalo and remain
there permanently.
  
I have been informed that the late General Marcy possessed
a white buffalo skin. If it is still in existence,
and is really *white*, it is to be hoped that
so great a rarity may find a permanent abiding place
in some museum where the remains of *Bison americanus*
are properly appreciated.

**V. THE HABITS OF THE BUFFALO.**

The history of the buffalo’s daily life and
habits should begin with the “running season.”
This period occupied the months of August and September,
and was characterized by a degree of excitement and
activity throughout the entire herd quite foreign
to the ease-loving and even slothful nature which
was so noticeable a feature of the bison’s character
at all other times.
  
The mating season occurred when the herd was on its
summer range. The spring calves were from two
to four months old. Through continued feasting
on the new crop of buffalo-grass and bunch-grass—­the
most nutritious in the world, perhaps—­every
buffalo in the herd had grown round-sided, fat, and
vigorous. The faded and weather-beaten suit of
winter hair had by that time fallen off and given place
to the new coat of dark gray and black, and, excepting
for the shortness of his hair, the buffalo was in
prime condition.

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During the “running season,” as it was
called by the plainsmen, the whole nature of the herd
was completely changed. Instead of being broken
up into countless small groups and dispersed over a
vast extent of territory, the herd came together in
a dense and confused mass of many thousand individuals,
so closely congregated as to actually blacken the
face of the landscape. As if by a general and
irresistible impulse, every straggler would be drawn
to the common center, and for miles on every side
of the great herd the country would be found entirely
deserted.
  
At this time the herd itself became a seething mass
of activity and excitement. As usual under such
conditions, the bulls were half the time chasing the
cows, and fighting each other during the other half.
These actual combats, which were always of short duration
and over in a few seconds after the actual collision
took place, were preceded by the usual threatening
demonstrations, in which the bull lowers his head
until his nose almost touches the ground, roars like
a fog-horn until the earth seems to fairly tremble
with the vibration, glares madly upon his adversary
with half-white eyeballs, and with his forefeet paws
up the dry earth and throws it upward in a great cloud
of dust high above his back. At such times the
mingled roaring—­it can not truthfully be
described as lowing or bellowing—­of a number
of huge bulls unite and form a great volume of sound
like distant thunder, which has often been heard at
a distance of from 1 to 3 miles. I have even been
assured by old plainsmen that under favorable atmospheric
conditions such sounds have been heard five miles.
  
Notwithstanding the extreme frequency of combats between
the bulls during this season, their results were nearly
always harmless, thanks to the thickness of the hair
and hide on the head and shoulders, and the strength
of the neck.
  
Under no conditions was there ever any such thing
as the pairing off or mating of male and female buffaloes
for any length of time. In the entire process
of reproduction the bison’s habits were similar
to those of domestic cattle. For years the opinion
was held by many, in some cases based on misinterpreted
observations, that in the herd the identity of each
family was partially preserved, and that each old bull
maintained an individual harem and group of progeny
of his own. The observations of Colonel Dodge
completely disprove this very interesting theory;
for at best it was only a picturesque fancy, ascribing
to the bison a degree of intelligence which he never
possessed.
  
At the close of the breeding season the herd quickly
settles down to its normal condition. The mass
gradually resolves itself into the numerous bands
or herdlets of from twenty to a hundred individuals,
so characteristic of bison on their feeding grounds,
and these gradually scatter in search of the best
grass until the herd covers many square miles of country.

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In his search for grass the buffalo displayed but
little intelligence or power of original thought.
Instead of closely following the divides between water
courses where the soil was best and grass most abundant,
he would not hesitate to wander away from good feeding-grounds
into barren “bad lands,” covered with
sage-brush, where the grass was very thin and very
poor. In such broken country as Montana, Wyoming,
and southwestern Dakota, the herds, on reaching the
best grazing grounds on the divides, would graze there
day after day until increasing thirst compelled them
to seek for water. Then, actuated by a common
impulse, the search for a water-hole was begun in
a business-like way. The leader of a herd, or
“bunch,” which post was usually filled
by an old cow, would start off down the nearest “draw,”
or stream-heading, and all the rest would fall into
line and follow her. From the moment this start
was made there was no more feeding, save as a mouthful
of grass could be snatched now and then without turning
aside. In single file, in a line sometimes half
a mile long and containing between one and two hundred
buffaloes, the procession slowly marched down the coulée,
close alongside the gully as soon as the water-course
began to cut a pathway for itself. When the gully
curved to right or left the leader would cross its
bed and keep straight on until the narrow ditch completed
its wayward curve and came back to the middle of the
coulée. The trail of a herd in search of water
is usually as good a piece of engineering as could
be executed by the best railway surveyor, and is governed
by precisely the same principles. It always follows
the level of the valley, swerves around the high points,
and crosses the stream repeatedly in order to avoid
climbing up from the level. The same trail is
used again and again by different herds until the narrow
path, not over a foot in width, is gradually cut straight
down into the soil to a depth of several inches, as
if it had been done by a 12-inch grooving-plane.
By the time the trail has been worn down to a depth
of 6 or 7 inches, without having its width increased
in the least, it is no longer a pleasant path to walk
in, being too much like a narrow ditch. Then
the buffaloes abandon it and strike out a new one alongside,
which is used until it also is worn down and abandoned.
  
To day the old buffalo trails are conspicuous among
the very few classes of objects which remain as a
reminder of a vanished race. The herds of cattle
now follow them in single file just as the buffaloes
did a few years ago, as they search for water in the
same way. In some parts of the West, in certain
situations, old buffalo trails exist which the wild
herds wore down to a depth of 2 feet or more.

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Mile after mile marched the herd, straight down-stream,
bound for the upper water-hole. As the hot summer
drew on, the pools would dry up one by one, those
nearest the source being the first to disappear.
Toward the latter part of summer, the journey for
water was often a long one. Hole after hole would
be passed without finding a drop of water. At
last a hole of mud would be found, below that a hole
with a little muddy water, and a mile farther on the
leader would arrive at a shallow pool under the edge
of a “cut bank,” a white, snow-like deposit
of alkali on the sand encircling its margin, and incrusting
the blades of grass and rushed that grew up from the
bottom. The damp earth around the pool was cut
up by a thousand hoof-prints, and the water was warm,
strongly impregnated with alkali, and yellow with
animal impurities, but it was *water*. The
nauseous mixture was quickly surrounded by a throng
of thirsty, heated, and eager buffaloes of all ages,
to which the oldest and strongest asserted claims
of priority. There was much crowding and some
fighting, but eventually all were satisfied. After
such a long journey to water, a herd would usually
remain by it for some hours, lying down, resting,
and drinking at intervals until completely satisfied.
  
Having drunk its fill, the herd would never march
directly back to the choice feeding grounds it had
just left, but instead would leisurely stroll off
at a right angle from the course it came, cropping
for awhile the rich bunch grasses of the bottom-lands,
and then wander across the hills in an almost aimless
search for fresh fields and pastures new. When
buffaloes remained long in a certain locality it was
a common thing for them to visit the same watering-place
a number of times, at intervals of greater or less
duration, according to circumstances.
  
When undisturbed on his chosen range, the bison used
to be fond of lying down for an hour or two in the
middle of the day, particularly when fine weather
and good grass combined to encourage him in luxurious
habits. I once discovered with the field glass
a small herd of buffaloes lying down at midday on
the slope of a high ridge, and having ridden hard for
several hours we seized the opportunity to unsaddle
and give our horses an hour’s rest before making
the attack. While we were so doing, the herd
got up, shifted its position to the opposite side of
the ridge, and again laid down, every buffalo with
his nose pointing to windward.
  
Old hunters declare that in the days of their abundance,
when feeding on their ranges in fancied security,
the younger animals were as playful as well-fed domestic
calves. It was a common thing to see them cavort
and frisk around with about as much grace as young
elephants, prancing and running to and fro with tails
held high in air “like scorpions.”
  
Buffaloes are very fond of rolling in dry dirt or
even in mud, and this habit is quite strong in captive
animals. Not only is it indulged in during the
shedding season, but all through the fall and winter.
The two live buffaloes in the National Museum are
so much given to rolling, even in rainy weather, that
it is necessary to card them every few days to keep
them presentable.

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Bulls are much more given to rolling than the cows,
especially after they have reached maturity.
They stretch out at full length, rub their heads violently
to and fro on the ground, in which the horn serves
as the chief point of contact and slides over the
ground like a sled-runner. After thoroughly scratching
one side on mother earth they roll over and treat
the other in like manner. Notwithstanding his
sharp and lofty hump, a buffalo bull can roll completely
over with as much ease as any horse.
  
The vast amount of rolling and side-scratching on
the earth indulged in by bull buffaloes is shown in
the worn condition of the horns of every old specimen.
Often a thickness of half an inch is gone from the
upper half of each horn on its outside curve, at which
point the horn is worn quite flat. This is well
illustrated in the horns shown in the accompanying
plate, fig. 6.
  
[Illustration: DEVELOPMENT OF THE HORNS OF THE
AMERICAN BISON.
  
1. The Calf. 2. The Yearling. 3. Spike
Bull, 2 years old. 4. Spike Bull, 3 years old.
5. Bull, 4 years old. 6. Bull, 11 years
old. 7. Old “stub-horn” Bull, 20 years
old.]
  
Mr. Catlin[36] affords some very interesting and valuable
information in regard to the bison’s propensity
for wollowing in mad, and also the origin of the “fairy
circles,” which have caused so much speculation
amongst travelers:
  
[Note 36: North American Indians, vol. I,
p. 249, 250.]
  
“In the heat of summer, these huge animals,
which no doubt suffer very much with the great profusion
of their long and shaggy hair, or fur, often graze
on the low grounds of the prairies, where there is
a little stagnant water lying amongst the grass, and
the ground underneath being saturated with it, is
soft, into which the enormous bull, lowered down upon
one knee, will plunge his horns, and at last his head,
driving up the earth, and soon making an excavation
in the ground into which the water filters from amongst
the grass, forming for him in a few moments a cool
and comfortable bath, into which he plunges like a
hog in his mire.
  
“In this delectable laver he throws himself
flat upon his side, and forcing himself violently
around, with his horns and his huge hump on his shoulders
presented to the sides, he ploughs up the ground by
his rotary motion, sinking himself deeper and deeper
in the ground, continually enlarging his pool, in
which he at length becomes nearly immersed, and the
water and mud about him mixed into a complete mortar,
which changes his color and drips in streams from every
part of him as he rises up upon his feet, a hideous
monster of mud and ugliness, too frightful and too
eccentric to be described!

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“It is generally the leader of the herd that
takes upon him to make this excavation, and if not
(but another one opens the ground), the leader (who
is conqueror) marches forward, and driving the other
from it plunges himself into it; and, having cooled
his sides and changed his color to a walking mass
of mud and mortar, he stands in the pool until inclination
induces him to step out and give place to the next
in command who stands ready, and another, and another,
who advance forward in their turns to enjoy the luxury
of the wallow, until the whole band (sometimes a hundred
or more) will pass through it in turn,[37] each one
throwing his body around in a similar manner and each
one adding a little to the dimensions of the pool,
while he carries away in his hair an equal share of
the clay, which dries to a gray or whitish color and
gradually falls off. By this operation, which
is done perhaps in the space of half an hour, a circular
excavation of fifteen or twenty feet in diameter and
two feet in depth is completed and left for the water
to run into, which soon fills it to the level of the
ground.
  
[Note 37: In the District of Columbia work-house
we have a counterpart of this in the public bath-tub,
wherein forty prisoners were seen by a *Star*
reporter to bathe one after another in the same water!]
  
“To these sinks, the waters lying on the surface
of the prairies are continually draining and in them
lodging their vegetable deposits, which after a lapse
of years fill them up to the surface with a rich soil,
which throws up an unusual growth of grass and herbage,
forming conspicuous circles, which arrest the eye
of the traveler and are calculated to excite his surprise
for ages to come.”
  
During the latter part of the last century, when the
bison inhabited Kentucky and Pennsylvania, the salt
springs of those States were resorted to by thousands
of those animals, who drank of the saline waters and
licked the impregnated earth. Mr. Thomas Ashe[38]
affords us a most interesting account, from the testimony
of an eye witness, of the behavior of a bison at a
salt spring. The description refers to a locality
in western Pennsylvania, where “an old man, one
of the first settlers of this country, built his log
house on the immediate borders of a salt spring.
He informed me that for the first several seasons the
buffaloes paid him their visits with the utmost regularity;
they traveled in single files, always following each
other at equal distances, forming droves, on their
arrival, of about 300 each.
  
[Note 38: Travels in America in 1806. London,
1808.]

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“The first and second years, so unacquainted
were these poor brutes with the use of this man’s
house or with his nature, that in a few hours they
*rubbed* the house completely down, taking delight
in turning the logs off with their horns, while he
had some difficulty to escape from being trampled
under their feet or crushed to death in his own ruins.
At that period he supposed there could not have been
less than 2,000 in the neighborhood of the spring.
They sought for no manner of food, but only bathed
and drank three or four times a day and rolled in the
earth, or reposed with their flanks distended in the
adjacent shades; and on the fifth and sixth days separated
into distinct droves, bathed, drank, and departed
in single files, according to the exact order of their
arrival. They all rolled successively in the
same hole, and each thus carried away a coat of mud
to preserve the moisture on their skin and which,
when hardened and baked in the sun, would resist the
stings of millions of insects that otherwise would
persecute these peaceful travelers to madness or even
death.”
  
It was a fixed habit with the great buffalo herds
to move southward from 200 to 400 miles at the approach
of winter. Sometimes this movement was accomplished
quietly and without any excitement, but at other times
it was done with a rush, in which considerable distances
would be gone over on the double quick. The advance
of a herd was often very much like that of a big army,
in a straggling line, from four to ten animals abreast.
Sometimes the herd moved forward in a dense mass, and
in consequence often came to grief in quicksands,
alkali bogs, muddy crossings, and on treacherous ice.
In such places thousands of buffaloes lost their lives,
through those in the lead being forced into danger
by pressure of the mass coming behind. In this
manner, in the summer of 1867, over two thousand buffaloes,
out of a herd of about four thousand, lost their lives
in the quicksands of the Platte River, near Plum Creek,
while attempting to cross. One winter, a herd
of nearly a hundred buffaloes attempted to cross a
lake called Lac-qui-parle, in Minnesota, upon the
ice, which gave way, and drowned the entire herd.
During the days of the buffalo it was a common thing
for voyagers on the Missouri River to see buffaloes
hopelessly mired in the quicksands or mud along the
shore, either dead or dying, and to find their dead
bodies floating down the river, or lodged on the upper
ends of the islands and sand-bars.
  
Such accidents as these: it may be repeated,
were due to the great number of animals and the momentum
of the moving mass. The forced marches of the
great herds were like the flight of a routed army,
in which helpless individuals were thrust into mortal
peril by the irresistible force of the mass coming
behind, which rushes blindly on after their leaders.
In this way it was possible to decoy a herd toward
a precipice and cause it to plunge over en masse, the
leaders being thrust over by their followers, and
all the rest following of their own free will, like
the sheep who cheerfully leaped, one after another,
through a hole in the side of a high bridge because
their bell-wether did so.

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But it is not to be understood that the movement of
a great herd, because it was made on a run, necessarily
partook of the nature of a stampede in which a herd
sweeps forward in a body. The most graphic account
that I ever obtained of facts bearing on this point
was furnished by Mr. James McNaney, drawn from his
experience on the northern buffalo range in 1882.
His party reached the range (on Beaver Creek, about
100 miles south of Glendive) about the middle of November,
and found buffaloes already there; in fact they had
begun to arrive from the north as early as the middle
of October. About the first of December an immense
herd arrived from the north. It reached their
vicinity one night, about 10 o’clock, in a mass
that seemed to spread everywhere. As the hunters
sat in their tents, loading cartridges and cleaning
their rifles, a low rumble was heard, which gradually
increased to “a thundering noise,” and
some one exclaimed, “There! that’s a big
herd of buffalo coming in!” All ran out immediately,
and hallooed and discharged rifles to keep the buffaloes
from running over their tents. Fortunately, the
horses were picketed some distance away in a grassy
coulée, which the buffaloes did not enter. The
herd came at a jog trot, and moved quite rapidly.
“In the morning the whole country was black with
buffalo.” It was estimated that 10,000 head
were in sight. One immense detachment went down
on to a “flat” and laid down. There
it remained quietly, enjoying a long rest, for about
ten days. It gradually broke up into small bands,
which strolled off in various directions looking for
food, and which the hunters quietly attacked.
  
A still more striking event occurred about Christmas
time at the same place. For a few days the neighborhood
of McNaney’s camp had been entirely deserted
by buffaloes, not even one remaining. But one
morning about daybreak a great herd which was traveling
south began to pass their camp. A long line of
moving forms was seen advancing rapidly from the northwest,
coming in the direction of the hunters’ camp.
It disappeared in the creek valley for a few moments,
and presently the leaders suddenly came in sight again
at the top of “a rise” a few hundred yards
away, and came down the intervening slope at full speed,
within 50 yards of the two tents. After them came
a living stream of followers, all going at a gallop,
described by the observer as “a long lope,”
from four to ten buffaloes abreast. Sometimes
there would be a break in the column of a minute’s
duration, then more buffaloes would appear at the
brow of the hill, and the column went rushing by as
before. The calves ran with their mothers, and
the young stock got over the ground with much less
exertion than the older animals. For about four
hours, or until past 11 o’clock, did this column
of buffaloes gallop past the camp over a course no
wider than a village street. Three miles away
toward the south the long dark line of bobbing humps
and hind quarters wound to the right between two hills

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and disappeared. True to their instincts, the
hunters promptly brought out their rifles, and began
to fire at the buffaloes as they ran. A furious
fusilade was kept up from the very doors of the tents,
and from first to last over fifty buffaloes were killed.
Some fell headlong the instant they were hit, but
the greater number ran on until their mortal wounds
compelled them to halt, draw off a little way to one
side, and finally fall in their death struggles.
  
Mr. McNaney stated that the hunters estimated the
number of buffaloes *on that portion* of the
range that winter (1881-’82) at 100,000.
  
It is probable, and in fact reasonably certain, that
such forced-march migrations as the above were due
to snow-covered pastures and a scarcity of food on
the more northern ranges. Having learned that
a journey south will bring him to regions of less
snow and more grass, it is but natural that so lusty
a traveler should migrate. The herds or bands
which started south in the fall months traveled more
leisurely, with frequent halts to graze on rich pastures.
The advance was on a very different plan, taking place
in straggling lines and small groups dispersed over
quite a scope of country.
  
Unless closely pursued, the buffalo never chose to
make a journey of several miles through hilly country
on a continuous run. Even when fleeing from the
attack of a hunter, I have often had occasion to notice
that, if the hunter was a mile behind, the buffalo
would always walk when going uphill; but as soon as
the crest was gained he would begin to run, and go
down the slope either at a gallop or a swift trot.
In former times, when the buffalo’s world was
wide, when retreating from an attack he always ran
against the wind, to avoid running upon a new danger,
which showed that he depended more upon his sense of
smell than his eye-sight. During the last years
of his existence, however, this habit almost totally
disappeared, and the harried survivors learned to run
for the regions which offered the greatest safety.
But even to-day, if a Texas hunter should go into
the Staked Plains, and descry in the distance a body
of animals running against the wind, he would, without
a moment’s hesitation, pronounce them buffaloes,
and the chances are that he would be right.
  
In winter the buffalo used to face the storms, instead
of turning tail and “drifting” before
them helplessly, as domestic cattle do. But at
the same time, when beset by a blizzard, he would
wisely seek shelter from it in some narrow and deep
valley or system of ravines. There the herd would
lie down and wait patiently for the storm to cease.
After a heavy fall of snow, the place to find the
buffalo was in the flats and creek bottoms, where
the tall, rank bunch-grasses showed their tops above
the snow, and afforded the best and almost the only
food obtainable.

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When the snow-fall was unusually heavy, and lay for
a long time on the ground, the buffalo was forced
to fast for days together, and sometimes even weeks.
If a warm day came, and thawed the upper surface of
the snow sufficiently for succeeding cold to freeze
it into a crust, the outlook for the bison began to
be serious. A man can travel over a crust through
which the hoofs of a ponderous bison cut like chisels
and leave him floundering belly-deep. It was
at such times that the Indians hunted him on snow-shoes,
and drove their spears into his vitals as he wallowed
helplessly in the drifts. Then the wolves grew
fat upon the victims which they, also, slaughtered
almost without effort.
  
Although buffaloes did not often actually perish from
hunger and cold during the severest winters (save
in a few very exceptional cases), they often came
out in very poor condition. The old bulls always
suffered more severely than the rest, and at the end
of winter were frequently in miserable plight.
  
Unlike most other terrestrial quadrupeds of America,
so long as he could roam at will the buffalo had settled
migratory habits.[39] While the elk and black-tail
deer change their altitude twice a year, in conformity
with the approach and disappearance of winter, the
buffalo makes a radical change of latitude. This
was most noticeable in the great western pasture region,
where the herds were most numerous and their movements
most easily observed.
  
[Note 39: On page 248 of his “North American
Indians,” vol. I, Mr. Catlin declares pointedly
that “these animals are, truly speaking, gregarious,
but not migratory; they graze in immense and almost
incredible numbers at times, and roam about and over
vast tracts of country from east to west and from
west to east as often as from north to south, which
has often been supposed they naturally and habitually
did to accommodate themselves to the temperature of
the climate in the different latitudes.”
Had Mr. Catlin resided continuously in any one locality
on the great buffalo range, he would have found that
the buffalo had decided migratory habits. The
abundance of proof on this point renders it unnecessary
to eater fully into the details of the subject.]
  
At the approach of winter the whole great system of
herds which ranged from the Peace River to the Indian
Territory moved south a few hundred miles, and wintered
under more favorable circumstances than each band
would have experienced at its farthest north.
Thus it happened that nearly the whole of the great
range south of the Saskatchewan was occupied by buffaloes
even in winter.
  
The movement north began with the return of mild weather
in the early spring. Undoubtedly this northward
migration was to escape the heat of their southern
winter range rather than to find better pasture; for
as a grazing country for cattle all the year round,
Texas is hardly surpassed, except where it is overstocked.
It was with the buffaloes a matter of choice rather
than necessity which sent them on their annual pilgrimage
northward.

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Col. R. I. Dodge, who has made many valuable
observations on the migratory habits of the southern
buffaloes, has recorded the following:[40]
  
“Early in spring, as soon as the dry and apparently
desert prairie had begun to change its coat of dingy
brown to one of palest green, the horizon would begin
to be dotted with buffalo, single or in groups of
two or three, forerunners of the coming herd.
Thicker and thicker and in larger groups they come,
until by the time the grass is well up the whole vast
landscape appears a mass of buffalo, some individuals
feeding, others standing, others lying down, but the
herd moving slowly, moving constantly to the northward.
\* \* \* Some years, as in 1871, the buffalo appeared
to move northward in one immense column oftentimes
from 20 to 50 miles in width, and of unknown depth
from front to rear. Other years the northward
journey was made in several parallel columns, moving
at the same rate, and with their numerous flankers
covering a width of a hundred or more miles.
  
“The line of march of this great spring migration
was not always the same, though it was confined within
certain limits. I am informed by old frontiersmen
that it has not within twenty-five years crossed the
Arkansas River east of Great Bend nor west of Big Sand
Creek. The most favored routes crossed the Arkansas
at the mouth of Walnut Creek, Pawnee Fork, Mulberry
Creek, the Cimarron Crossing, and Big Sand Creek.
  
“As the great herd proceeds northward it is
constantly depleted, numbers wandering off to the
right and left, until finally it is scattered in small
herds far and wide over the vast feeding grounds, where
they pass the summer.
  
“When the food in one locality fails they go
to another, and towards fall, when the grass of the
high prairie becomes parched by the heat and drought,
they gradually work their way back to the south, concentrating
on the rich pastures of Texas and the Indian Territory,
whence, the same instinct acting on all, they are
ready to start together on the northward march as
soon as spring starts the grass.”
  
[Note 40: Our Wild Indians, p. 283, *et seq.*]
  
So long as the bison held undisputed possession of
the great plains his migratory habits were as above—­regular,
general, and on a scale that was truly grand.
The herds that wintered in Texas, the Indian Territory,
and New Mexico probably spent their summers in Nebraska,
southwestern Dakota, and Wyoming. The winter
herds of northern Colorado, Wyoming, Nebraska, and
southern Dakota went to northern Dakota and Montana,
while the great Montana herds spent the summer on
the Grand Coteau des Prairies lying between the Saskatchewan
and the Missouri. The two great annual expeditions
of the Red River half-breeds, which always took place
in summer, went in two directions from Winnipeg and
Pembina—­one, the White Horse Plain division,
going westward along the Qu’Appelle to the Saskatchewan
country, and the other, the Red River division, southwest
into Dakota. In 1840 the site of the present city
of Jamestown, Dakota, was the northeastern limit of
the herds that summered in Dakota, and the country
lying between that point and the Missouri was for years
the favorite hunting ground of the Red River division.

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The herds which wintered on the Montana ranges always
went north in the early spring, usually in March,
so that during the time the hunters were hauling in
the hides taken on the winter hunt the ranges were
entirely deserted. It is equally certain, however,
that a few small bauds remained in certain portions
of Montana throughout the summer. But the main
body crossed the international boundary, and spent
the summer on the plains of the Saskatchewan, where
they were hunted by the half-breeds from the Red River
settlements and the Indians of the plains. It
is my belief that in this movement nearly all the buffaloes
of Montana and Dakota participated, and that the herds
which spent the summer in Dakota, where they were
annually hunted by the Red River half-breeds, came
up from Kansas, Colorado, and Nebraska.
  
While most of the calves were born on the summer ranges,
many were brought forth en route. It was the
habit of the cows to retire to a secluded spot, if
possible a ravine well screened from observation,
bring forth their young, and nourish and defend them
until they were strong enough to join the herd.
Calves were born all the time from March to July,
and sometimes even as late as August. On the summer
ranges it was the habit of the cows to leave the bulls
at calving time, and thus it often happened that small
herds were often seen composed of bulls only.
Usually the cow produced but one calf, but twins were
not uncommon. Of course many calves were brought
forth in the herd, but the favorite habit of the cow
was as stated. As soon as the young calves were
brought into the herd, which for prudential reasons
occurred at the earliest possible moment, the bulls
assumed the duty of protecting them from the wolves
which at all times congregated in the vicinity of a
herd, watching for an opportunity to seize a calf or
a wounded buffalo which might be left behind.
A calf always follows its mother until its successor
is appointed and installed, unless separated from her
by force of circumstances. They suck until they
are nine months old, or even older, and Mr. McNaney
once saw a lusty calf suck its mother (in January)
on the Montana range several hours after she had been
killed for her skin.
  
When a buffalo is wounded it leaves the herd immediately
and goes off as far from the line of pursuit as it
can get, to escape the rabble of hunters, who are
sure to follow the main body. If any deep ravines
are at hand the wounded animal limps away to the bottom
of the deepest and most secluded one, and gradually
works his way up to its very head, where he finds
himself in a perfect cul-de-sac, barely wide enough
to admit him. Here he is so completely hidden
by the high walls and numerous bends that his pursuer
must needs come within a few feet of his horns before
his huge bulk is visible. I have more than once
been astonished at the real impregnability of the
retreats selected by wounded bison. In following
up wounded bulls in ravine headings it always became

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too dangerous to make the last stage of the pursuit
on horseback, for fear of being caught in a passage
so narrow as to insure a fatal accident to man or
horse in case of a sudden discovery of the quarry.
I have seen wounded bison shelter in situations where
a single bull could easily defend himself from a whole
pack of wolves, being completely walled in on both
sides and the rear, and leaving his foes no point
of attack save his head and horns.
  
Bison which were nursing serious wounds most often
have gone many days at a time without either food
or water, and in this connection it may be mentioned
that the recuperative power of a bison is really wonderful.
Judging from the number of old leg wounds, fully healed,
which I have found in freshly killed bisons, one may
be tempted to believe that a bison never died of a
broken leg. One large bull which I skeletonized
had had his humerus shot squarely in two, but it had
united again more firmly than ever. Another large
bull had the head of his left femur and the hip socket
shattered completely to pieces by a big ball, but he
had entirely recovered from it, and was as lusty a
runner as any bull we chased. We found that while
a broken leg was a misfortune to a buffalo, it always
took something more serious than that to stop him.

**VI.  THE FOOD OF THE BISON.**

It is obviously impossible to enumerate all the grasses
which served the bison as food on his native heath
without presenting a complete list of all the plants
of that order found in a given region; but it is at
least desirable to know which of the grasses of the
great pasture region were his favorite and most common
food. It was the nutritious character and marvelous
abundance of his food supply which enabled the bison
to exist in such absolutely countless numbers as characterized
his occupancy of the great plains. The following
list comprises the grasses which were the bison’s
principal food, named in the order of their importance:
 *Bouteloua oligostachya* (buffalo, grama, or
mesquite grass).—­This remarkable grass
formed the *pièce de résistance* of the bison’s
bill of fare in the days when he flourished, and it
now comes to us daily in the form of beef produced
of primest quality and in greatest quantity on what
was until recently the great buffalo range. This
grass is the most abundant and widely distributed
species to be found in the great pasture region between
the eastern slope of the Rocky Mountains and the nineteenth
degree of west longitude. It is the principal
grass of the plains from Texas to the British Possessions,
and even in the latter territory it is quite conspicuous.
To any one but a botanist its first acquaintance means
a surprise. Its name and fame lead the unacquainted
to expect a grass which is tall, rank, and full of
“fodder,” like the “blue joint”
(*Andropogon provincialis*). The grama grass
is very short, the leaves being usually not more than

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2 or 3 inches in length and crowded together at the
base of the stems. The flower stalk is about a
foot in height, but on grazed lands are eaten off and
but seldom seen. The leaves are narrow and inclined
to curl, and lie close to the ground. Instead
of developing a continuous growth, this grass grows
in small, irregular patches, usually about the size
of a man’s hand, with narrow strips of perfectly
bare ground between them. The grass curls closely
upon the ground, in a woolly carpet or cushion, greatly
resembling a layer of Florida moss. Even in spring-time
it never shows more color than a tint of palest green,
and the landscape which is dependent upon this grass
for color is never more than “a gray and melancholy
waste.” Unlike the soft, juicy, and succulent
grasses of the well-watered portions of the United
States, the tiny leaves of the grama grass are hard,
stiff, and dry. I have often noticed that in grazing
neither cattle nor horses are able to bite off the
blades, but instead each leaf is pulled out of the
tuft, seemingly by its root.
  
Notwithstanding its dry and uninviting appearance,
this grass is highly nutritious, and its fat-producing
qualities are unexcelled. The heat of summer
dries it up effectually without destroying its nutritive
elements, and it becomes for the remainder of the year
excellent hay, cured on its own roots. It affords
good grazing all the year round, save in winter, when
it is covered with snow, and even then, if the snow
is not too deep, the buffaloes, cattle, and horses
paw down through it to reach the grass, or else repair
to wind-swept ridges and hill-tops, where the snow
has been blown off and left the grass partly exposed.
Stock prefer it to all the other grasses of the plains.
  
On bottom-lands, where moisture is abundant, this
grass develops much more luxuriantly, growing in a
close mass, and often to a height of a foot or more,
if not grazed down, when it is cut for hay, and sometimes
yields 11/2 tons to the acre. In Montana and the
north it is generally known as “buffalo-grass,”
a name to which it would seem to be fully entitled,
notwithstanding the fact that this name is also applied,
and quite generally, to another species, the next
to be noticed.
 *Buchloë dactyloides* (Southern buffalo-grass).—­This
species is next in value and extent of distribution
to the grama grass. It also is found all over
the great plains south of Nebraska and southern Wyoming,
but not further north, although in many localities
it occurs so sparsely as to be of little account.
A single bunch of it very greatly resembles *Bouteloua
oligostachya*, but its general growth is very different.
It is very short, its general mass seldom rising more
than 3 inches above the ground. It grows in extensive
patches, and spreads by means of stolons, which sometimes
are 2 feet in length, with joints every 3 or 4 inches.
Owing to its southern distribution this might well
be named the Southern buffalo grass, to distinguish
it from the two other species of higher latitudes,
to which the name “buffalo” has been fastened
forever.

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*Stipa spartea* (Northern buffalo-grass; wild
oat).—­This grass is found in southern Manitoba,
westwardly across the plains to the Rocky Mountains,
and southward as far as Montana, where it is common
in many localities. On what was once the buffalo
range of the British Possessions this rank grass formed
the bulk of the winter pasturage, and in that region
is quite as famous as our grama grass. An allied
species (*Stipa viridula*, bunch-grass) is “widely
diffused over our Rocky Mountain region, extending
to California and British America, and furnishing
a considerable part of the wild forage of the region”
*Stipa spartea* bears an ill name among stockmen
on account of the fact that at the base of each seed
is a very hard and sharp-pointed callus, which under
certain circumstances (so it is said) lodges in the
cheeks of domestic animals that feed upon this grass
when it is dry, and which cause much trouble.
But the buffalo, like the wild horse and half-wild
range cattle, evidently escaped this annoyance.
This grass is one of the common species over a wide
area of the northern plains, and is always found on
soil which is comparatively dry. In Dakota, Minnesota,
and northwest Iowa it forms a considerable portion
of the upland prairie hay.
  
Of the remaining grasses it is practically impossible
to single out any one as being specially entitled
to fourth place in this list. There are several
species which flourish in different localities, and
in many respects appear to be of about equal importance
as food for stock. Of these the following are
the most noteworthy:
 *Aristida purpurea* (Western beard-grass; purple
“bunch-grass” of Montana).—­On
the high, rolling prairies of the Missouri-Yellowstone
divide this grass is very abundant. It grows in
little solitary bunches, about 6 inches high, scattered
through the curly buffalo-grass (*Bouteloua oligostachya*).
Under more favorable conditions it grows to a height
of 12 to 18 inches. It is one of the prettiest
grasses of that region, and in the fall and winter
its purplish color makes it quite noticeable.
The Montana stockmen consider it one of the most valuable
grasses of that region for stock of all kinds.
Mr. C. M. Jacobs assured me that the buffalo used
to be very fond of this grass, and that “wherever
this grass grew in abundance there were the best hunting-grounds
for the bison.” It appears that *Aristida
purpurea* is not sufficiently abundant elsewhere
in the Northwest to make it an important food for
stock; but Dr. Vesey declares that it is “abundant
on the plains of Kansas, New Mexico, and Texas.”
 *Koeleria cristata.*—­Very generally
distributed from Texas and New Mexico to the British
Possessions; sand hills and arid soils; mountains,
up to 8,000 feet.
 *Poa tenuifolia* (blue-grass of the plains and
mountains).—­A valuable “bunch-grass,”
widely distributed throughout the great pasture region;
grows in all sorts of soils and situations; common
in the Yellowstone Park.

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*Festuca scabrella* (bunch-grass).—­One
of the most valuable grasses of Montana and the Northwest
generally; often called the “great bunch-grass.”
It furnishes excellent food for horses and cattle,
and is so tall it is cut in large quantities for hay.
This is the prevailing species on the foot-hills and
mountains generally, up to an altitude of 7,000 feet,
where it is succeeded by *Festuca ovina*.
 *Andropogon provincialis* (blue stem).—­An
important species, extending from eastern Kansas and
Nebraska to the foot-hills of the Rocky Mountains,
and from Northern Texas to the Saskatchewan; common
in Montana on alkali flats and bottom lands generally.
This and the preceding species were of great value
to the buffalo in winter, when the shorter grasses
were covered with snow.
 *Andropogon scoparius* (bunch grass; broom sedge;
wood-grass).—­Similar to the preceding in
distribution and value, but not nearly so tall.
  
None of the buffalo grasses are found in the mountains.
In the mountain regions which have been visited by
the buffalo and in the Yellowstone Park, where to-day
the only herd remaining in a state of nature is to
be found (though not by the man with a gun), the following
are the grasses which form all but a small proportion
of the ruminant food: *Koeleria cristata*;
*Poa tenuifolia* (Western blue-grass); *Stipa
viridula* (feather-grass); *Stipa comata*;
*Agropyrum divergens*; *Agropyrum caninum*.
  
When pressed by hunger, the buffalo used to browse
on certain species of sage-brush, particularly *Atriplex
canescens* of the Southwest. But he was discriminating
in the matter of diet, and as far as can be ascertained
he was never known to eat the famous and much-dreaded
“loco” weed (*Astragalus molissimus*),
which to ruminant animals is a veritable drug of madness.
Domestic cattle and horses often eat this plant; where
it is abundant, and become demented in consequence.

**VII.  MENTAL CAPACITY AND DISPOSITION.**

(1) *Reasoning from cause to effect.*—­The
buffalo of the past was an animal of a rather low
order of intelligence, and his dullness of intellect
was one of the important factors in his phenomenally
swift extermination. He was provokingly slow
in comprehending the existence and nature of the dangers
that threatened his life, and, like the stupid brute
that he was, would very often stand quietly and see
two or three score, or even a hundred, of his relatives
and companions shot down before his eyes, with no
other feeling than one of stupid wonder and curiosity.
Neither the noise nor smoke of the still-hunter’s
rifle, the falling, struggling, nor the final death
of his companions conveyed to his mind the idea of
a danger to be fled from, and so the herd stood still
and allowed the still-hunter to slaughter its members
at will.

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Like the Indian, and many white men also, the buffalo
seemed to feel that their number was so great it could
never be sensibly diminished. The presence of
such a great multitude gave to each of its individuals
a feeling of security and mutual support that is very
generally found in animals who congregate in great
herds. The time was when a band of elk would
stand stupidly and wait for its members to be shot
down one after another; but it is believed that this
was due more to panic than to a lack of comprehension
of danger.
  
The fur seals who cover the “hauling grounds”
of St. Paul and St. George Islands, Alaska, in countless
thousands, have even less sense of danger and less
comprehension of the slaughter of thousands of their
kind, which takes place daily, than had the bison.
They allow themselves to be herded and driven off
landwards from the hauling-ground for half a mile
to the killing-ground, and, finally, with most cheerful
indifference, permit the Aleuts to club their brains
out.
  
It is to be added that whenever and wherever seals
or sea-lions inhabit a given spot, with but few exceptions,
it is an easy matter to approach individuals of the
herd. The presence of an immense number of individuals
plainly begets a feeling of security and mutual support.
And let not the bison or the seal be blamed for this,
for man himself exhibits the same foolish instinct.
Who has not met the woman of mature years and full
intellectual vigor who is mortally afraid to spend
a night entirely alone in her own house, but is perfectly
willing to do so, and often does do so without fear,
when she can have the company of one small and helpless
child, or, what is still worse, three or four of them!
But with the approach of extermination, and the utter
breaking up of all the herds, a complete change has
been wrought in the character of the bison. At
last, but alas! entirely too late, the crack of the
rifle and its accompanying puff of smoke conveyed
to the slow mind of the bison a sense of deadly danger
to himself. At last he recognized man, whether
on foot or horseback, or peering at him from a coulée,
as his mortal enemy. At last he learned to run.
In 1886 we found the scattered remnant of the great
northern herd the wildest and most difficult animals
to kill that we had ever hunted in any country.
It had been only through the keenest exercise of all
their powers of self-preservation that those buffaloes
had survived until that late day, and we found them
almost as swift as antelopes and far more wary.
The instant a buffalo caught sight of a man, even
though a mile distant, he was off at the top of his
speed, and generally ran for some wild region several
miles away.

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In our party was an experienced buffalo-hunter, who
in three years had slaughtered over three thousand
head for their hides. He declared that if he
could ever catch a “bunch” at rest he could
“get a stand” the same as he used to do,
and kill several head before the rest would run.
It so happened that the first time we found buffaloes
we discovered a bunch of fourteen head, lying in the
sun at noon, on the level top of a low butte, all
noses pointing up the wind. We stole up within
range and fired. At the instant the first shot
rang out up sprang every buffalo as if he had been
thrown upon his feet by steel springs, and in a second’s
time the whole bunch was dashing away from us with
the speed of race-horses.
  
Our buffalo-hunter declared that in chasing buffaloes
we could count with certainty upon their always running
against the wind, for this had always been their habit.
Although this was once their habit, we soon found
that those who now represent the survival of the fittest
have learned better wisdom, and now run (1) away from
their pursuer and (2) toward the best hiding place.
Now they pay no attention whatever to the direction
of the wind, and if a pursuer follows straight behind,
a buffalo may change his course three or four times
in a 10-mile chase. An old bull once led one
of our hunters around three-quarters of a circle which
had a diameter of 5 or 6 miles.
  
The last buffaloes were mentally as capable of taking
care of themselves as any animals I ever hunted.
The power of original reasoning which they manifested
in scattering all over a given tract of rough country,
like hostile Indians when hotly pressed by soldiers,
in the Indian-like manner in which they hid from sight
in deep hollows, and, as we finally proved, in *grazing
only in ravines and hollows*, proved conclusively
that *but for the use of fire-arms* those very
buffaloes would have been actually safe from harm
by man, and that they would have increased indefinitely.
As they were then, the Indians’ arrows and spears
could never have been brought to bear upon them, save
in rare instances, for they had thoroughly learned
to dread man and fly from him for their lives.
Could those buffaloes have been protected from rifles
and revolvers the resultant race would have displayed
far more active mental powers, keener vision, and
finer physique than the extinguished race possessed.
  
In fleeing from an enemy the buffalo ran against the
wind, in order that his keen scent might save him
from the disaster of running upon new enemies; which
was an idea wholly his own, and not copied by any other
animal so far as known.

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But it must be admitted that the buffalo of the past
was very often a most stupid reasoner. He would
deliberately walk into a quicksand, where hundreds
of his companions were already ingulfed and in their
death-struggle. He would quit feeding, run half
a mile, and rush headlong into a moving train of cars
that happened to come between him and the main herd
on the other side of the track. He allowed himself
to be impounded and slaughtered by a howling mob in
a rudely constructed pen, which a combined effort
on the part of three or four old bulls would have
utterly demolished at any point. A herd of a thousand
buffaloes would allow an armed hunter to gallop into
their midst, very often within arm’s-length,
when any of the bulls nearest him might easily have
bowled him over and had him trampled to death in a
moment. The hunter who would ride in that manner
into a herd of the Cape buffaloes of Africa (*Bubalus
caffer*) would be unhorsed and killed before he
had gone half a furlong.
  
(2) *Curiosity.*—­The buffalo of the
past possessed but little curiosity; he was too dull
to entertain many unnecessary thoughts. Had he
possessed more of this peculiar trait, which is the
mark of an inquiring mind, he would much sooner have
accomplished a comprehension of the dangers that proved
his destruction. His stolid indifference to everything
he did not understand cost him his existence, although
in later years he displayed more interest in his environment.
On one occasion in hunting I staked my success with
an old bull I was pursuing on the chance that when
he reached the crest of a ridge his curiosity would
prompt him to pause an instant to look at me.
Up to that moment he had had only one quick glance
at me before he started to run. As he climbed
the slope ahead of me, in full view, I dismounted and
made ready to fire the instant he should pause to
look at me. As I expected, he did come to a fall
stop on the crest of the ridge, and turned half around
to look at me. But for his curiosity I should
have been obliged to fire at him under very serious
disadvantages.
  
(3) *Fear.*—­With the buffalo, fear
of man is now the ruling passion. Says Colonel
Dodge: “He is as timid about his flank and
rear as a raw recruit. When traveling nothing
in front stops him, but an unusual object in the rear
will send him to the right-about [toward the main
body of the herd] at the top of his speed.”
  
(4) *Courage.*—­It was very seldom
that the buffalo evinced any courage save that of
despair, which even cowards possess. Unconscious
of his strength, his only thought was flight, and
it was only when brought to bay that he was ready
to fight. Now and then, however, in the chase,
the buffalo turned upon his pursuer and overthrew
horse and rider. Sometimes the tables were completely
turned, and the hunter found his only safety in flight.
During the buffalo slaughter the butchers sometimes
had narrow escapes from buffaloes supposed to be dead
or mortally wounded, and a story comes from the great
northern range south of Glendive of a hunter who was
killed by an old bull whose tongue he had actually
cut out in the belief that he was dead.

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Sometimes buffalo cows display genuine courage in
remaining with their calves in the presence of danger,
although in most cases they left their offspring to
their fate. During a hunt for live buffalo calves,
undertaken by Mr. C. J. Jones of Garden City, Kans.,
in 1886, and very graphically described by a staff
correspondent of the American Field in a series of
articles in that journal under the title of “The
Last of the Buffalo,” the following remarkable
incident occurred:[41]
  
[Note 41: American Field, July 24, 1886, p. 78.]
  
“The last calf was caught by Carter, who roped
it neatly as Mr. Jones cut it out of the herd and
turned it toward him. This was a fine heifer
calf, and was apparently the idol of her mother’s
heart, for the latter came very near making a casualty
the price of the capture. As soon as the calf
was roped, the old cow left the herd and charged on
Carter viciously, as he bent over his victim.
Seeing the danger, Mr. Jones rode in at just the nick
of time, and drove the cow off for a moment; but she
returned again and again, and finally began charging
him whenever he came near; so that, much as he regretted
it, he had to shoot her with his revolver, which he
did, killing her almost immediately.”
  
The mothers of the thirteen other calves that were
caught by Mr. Jones’s party allowed their offspring
to be “cut out,” lassoed, and tied, while
they themselves devoted all their energies to leaving
them as far behind as possible.
  
(5) *Affection.*—­While the buffalo
cows manifested a fair degree of affection for their
young, the adult bulls of the herd often displayed
a sense of responsibility for the safety of the calves
that was admirable, to say the least. Those who
have had opportunities for watching large herds tell
us that whenever wolves approached and endeavored to
reach a calf the old bulls would immediately interpose
and drive the enemy away. It was a well-defined
habit for the bulls to form the outer circle of every
small group or section of a great herd, with the calves
in the center, well guarded from the wolves, which
regarded them as their most choice prey.
  
Colonel Dodge records a remarkable incident in illustration
of the manner in which the bull buffaloes protected
the calves of the herd.[42]
  
[Note 42: Plains of the Great West, p. 125.]
  
“The duty of protecting the calves devolved
almost entirely on the bulls. I have seen evidences
of this many times, but the most remarkable instance
I have ever heard of was related to me by an army surgeon,
who was an eye-witness.
  
“He was one evening returning to camp after
a day’s hunt, when his attention was attracted
by the curious action of a little knot of six or eight
buffalo. Approaching sufficiently near to see
clearly, he discovered that this little knot were
all bulls, standing in a close circle, with their
heads outwards, while in a concentric circle at some
12 or 15 paces distant sat, licking their chaps in
impatient expectancy, at least a dozen large gray
wolves (excepting man, the most dangerous enemy of
the buffalo).

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“The doctor determined to watch the performance.
After a few moments the knot broke up, and, still
keeping in a compact mass, started on a trot for the
main herd, some half a mile oft”. To his
very great astonishment, the doctor now saw that the
central and controlling figure of this mass was a
poor little calf so newly born as scarcely to be able
to walk. After going 50 or 100 paces the calf
laid down, the bulls disposed themselves in a circle
as before, and the wolves, who had trotted along on
each side of their retreating supper, sat down and
licked their chaps again; and though the doctor did
not see the finale, it being late and the camp distant,
he had no doubt that the noble fathers did their whole
duty by their offspring, and carried it safely to
the herd.”
  
(6) *Temper.*—­I have asked many old
buffalo hunters for facts in regard to the temper
and disposition of herd buffaloes, and all agree that
they are exceedingly quiet, peace loving, and even
indolent animals at all times save during the rutting
season. Says Colonel Dodge: “The habits
of the buffalo are almost identical with those of
the domestic cattle. Owing either to a more pacific
disposition, or to the greater number of bulls, there,
is very little fighting, even at the season when it
might be expected. I have been among them for
days, have watched their conduct for hours at a time,
and with the very best opportunities for observation,
but have never seen a regular combat between bulls.
They frequently strike each other with their horns,
but this seems to be a mere expression of impatience
at being crowded.”
  
In referring to the “running season” of
the buffalo, Mr. Catlin says: “It is no
uncommon thing at this season, at these gatherings,
to see several thousands in a mass eddying and wheeling
about under a cloud of dust, which is raised by the
bulls as they are pawing in the dirt, or engaged in
desperate combats, as they constantly are, plunging
and butting at each other in a most furious manner.”
  
On the whole, the disposition of the buffalo is anything
but vicious. Both sexes yield with surprising
readiness to the restraints of captivity, and in a
remarkably short time become, if taken young, as fully
domesticated as ordinary cattle. Buffalo calves
are as easily tamed as domestic ones, and make very
interesting pets. A prominent trait of character
in the captive buffalo is a mulish obstinacy or headstrong
perseverance under certain circumstances that is often
very annoying. When a buffalo makes up his mind
to go through a fence, he is very apt to go through,
either peaceably or by force, as occasion requires.
Fortunately, however, the captive animals usually accept
a fence in the proper spirit, and treat it with a
fair degree of respect.

**VIII.  VALUE OF THE BUFFALO TO MAN.**

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It may fairly be supposed that if the people of this
country could have been made to realize the immense
money value of the great buffalo herds as they existed
in 1870, a vigorous and successful effort would have
been made to regulate and restrict the slaughter.
The fur seal of Alaska, of which about 100,000 are
killed annually for their skins, yield an annual revenue
to the Government of $100,000 and add $900,000 more
to the actual wealth of the United States. It
pays to protect those seals, and we mean to protect
them against all comers who seek their unrestricted
slaughter, no matter whether the poachers be American,
English, Russian, or Canadian. It would be folly
to do otherwise, and if those who would exterminate
the fur seal by shooting them in the water will not
desist for the telling, then they must by the compelling.
  
The fur seal is a good investment for the United States,
and their number is not diminishing. As the buffalo
herds existed in 1870, 500,000 head of bulls, young
and old, could have been killed every year for a score
of years without sensibly diminishing the size of the
herds. At a low estimate these could easily have
been made to yield various products worth $5 each,
as follows: Kobe, $2.50; tongue, 20 cents; meat
of hindquarters, $2; bones, horns, and hoofs, 25 cents;
total, $5. And the amount annually added to the
wealth of the United States would have been $2,500,000.
  
On all the robes taken for the market, say, 200,000,
the Government could have collected a tax of 50 cents
each, which would have yielded a sum doubly sufficient
to have maintained a force of mounted police fully
competent to enforce the laws regulating the slaughter.
Had a contract for the protection of the buffalo been
offered at $50,000 per annum, ay, or even half that
sum, an army of competent men would have competed for
it every year, and it could have been carried out to
the letter. But, as yet, the American people
have not learned to spend money for the protection
of valuable game; and by the time they do learn it,
there will be no game to protect.
  
Even despite the enormous waste of raw material that
ensued in the utilization of the buffalo product,
the total cash value of all the material derived from
this source, if it could only be reckoned up, would
certainly amount to many millions of dollars—­perhaps
twenty millions, all told. This estimate may,
to some, seem high, but when we stop to consider that
in eight years, from 1876 to 1884, a single firm,
that of Messrs. J. & A. Boskowitz, 105 Greene street,
New York, paid out the enormous sum of $923,070 (nearly
one million) for robes and hides, and that in a single
year (1882) another firm, that of Joseph Ullman, 165
Mercer street, New York, paid out $216,250 for robes
and hides, it may not seem so incredible.
  
Had there been a deliberate plan for the suppression
of all statistics relating to the slaughter of buffalo
in the United States, and what it yielded, the result
could not have been more complete barrenness than
exists to-day in regard to this subject. There
is only one railway company which kept its books in
such a manner as to show the kind and quantity of
its business at that time. Excepting this, nothing
is known definitely.

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Fortunately, enough facts and figures were recorded
during the hunting operations of the Red River half-breeds
to enable us, by bringing them all together, to calculate
with sufficient exactitude the value of the buffalo
to them from 1820 to 1840. The result ought to
be of interest to all who think it is not worth while
to spend money in preserving our characteristic game
animals.
  
In Ross’s “Red River Settlement,”
pp. 242-273, and Schoolcraft’s “North
American Indians,” Part iv, pp. 101-110, are
given detailed accounts of the conduct and results
of two hunting expeditions by the half-breeds, with
many valuable statistics. On this data we base
our calculation.
  
Taking the result of one particular day’s slaughter
as an index to the methods of the hunters in utilizing
the products of the chase, we find that while “not
less than 2,500 animals were killed,” out of
that number only 375 bags of pemmican and 240 bales
of dried meat were made. “Now,” says
Mr. Ross,” making all due allowance for waste,
750 animals would have been ample for such a result.
What, then, we might ask, became of the remaining
1,750! \* \* \* Scarcely one-third in number of the animals
killed is turned to account.”
  
A bundle of dried meat weighs 60 to 70 pounds, and
a bag of pemmican 100 to 110 pounds. If economically
worked up, a whole buffalo cow yields half a bag of
pemmican (about 55 pounds) and three-fourths of a bundle
of dried meat (say 45 pounds). The most economical
calculate that from eight to ten cows are required
to load a single Red River cart. The proceeds
of 1,776 cows once formed 228 bags of pemmican, 1,213
bales of dried meat, 166 sacks of tallow, each weighing
200 pounds, 556 bladders of marrow weighing 12 pounds
each, and the value of the whole was $8,160.
The total of the above statement is 132,057 pounds
of buffalo product for 1,776 cows, or within a fraction
of 75 pounds to each cow. The bulls and young
animals killed were not accounted for.
  
The expedition described by Mr. Ross contained 1,210
carts and 620 hunters, and returned with 1,089,000
pounds of meat, making 900 pounds for each cart, and
200 pounds for each individual in the expedition, of
all ages and both sexes. Allowing, as already
ascertained, that of the above quantity of product
every 75 pounds represents one cow saved and two and
one third buffaloes wasted, it means that 14,520 buffaloes
were killed and utilized and 33,250 buffaloes were
killed and eaten fresh or wasted, and 47,770 buffaloes
were killed by 620 hunters, or an average of 77 buffaloes
to each hunter. The total number of buffaloes
killed for each cart was 39.
  
Allowing, what was actually the case, that every buffalo
killed would, if properly cared for, have yielded
meat, fat, and robe worth at least $5, the total value
of the buffaloes slaughtered by that expedition amounted
to $258,850, and of which the various products actually
utilized represented a cash value of $72,001 added
to the wealth of the Red River half-breeds.

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In 1820 there went 540 carts to the buffalo plains;
in 1825, 680; in 1830, 820; in 1835, 970; in 1840,
1,210.
  
From 1820 to 1825 the average for each year was 610;
from 1825 to 1830, 750; from 1830 to 1835, 895; from
1835 to 1840, 1,000.
  
Accepting the statements of eye-witnesses that for
every buffalo killed two and one-third buffaloes are
wasted or eaten on the spot, and that every loaded
cart represented thirty-nine dead buffaloes which were
worth when utilized $5 each, we have the following
series of totals:
  
From 1820 to 1825 five expeditions, of 610 carts each,
killed 118,950 buffaloes, worth $594,750.
  
From 1825 to 1830 five expeditions, of 750 carts each,
killed 146,250 buffaloes, worth $731,250.
  
From 1830 to 1835 five expeditions, of 895 carts each,
killed 174,525 buffaloes, worth $872,625.
  
From 1835 to 1840 five expeditions, of 1,090 carts
each, killed 212,550 buffaloes, worth $1,062,750.
  
Total number of buffaloes killed in twenty years,[43]
$652,275; total value of buffaloes killed in twenty
years,[43] $3,261,375; total value of the product
utilized[43] and added to the wealth of the settlements,
$978,412.
  
[Note 43: By the Red River half-breeds only.]
  
The Eskimo has his seal, which yields nearly everything
that he requires; the Korak of Siberia depends for
his very existence upon his reindeer; the Ceylon native
has the cocoa-nut palm, which leaves him little else
to desire, and the North American Indian had the American,
bison. If any animal was ever designed by the
hand of nature for the express purpose of supplying,
at one stroke, nearly all the wants of an entire race,
surely the buffalo was intended for the Indian.
  
And right well was this gift of the gods utilized
by the children of nature to whom it came. Up
to the time when the United States Government began
to support our Western Indians by the payment of annuities
and furnishing quarterly supplies of food, clothing,
blankets, cloth, tents, *etc*., the buffalo had
been the main dependence of more than 50,000 Indians
who inhabited the buffalo range and its environs.
Of the many different uses to which the buffalo and
his various parts were, put by the red man, the following
were the principal ones:
  
The body of the buffalo yielded fresh meat, of which
thousands of tons were consumed; dried meat, prepared
in summer for winter use; pemmican (also prepared
in summer), of meat, fat, and berries; tallow, made
up into large balls or sacks, and kept in store; marrow,
preserved in bladders; and tongues, dried and smoked,
and eaten as a delicacy.
  
The skin of the buffalo yielded a robe, dressed with
the hair on, for clothing and bedding; a hide, dressed
without the hair, which made a teepee cover, when
a number were sewn together; boats, when sewn together
in a green state, over a wooden framework. Shields,
made from the thickest portions, as rawhide; ropes,
made up as rawhide; clothing of many kinds; bags for
use in traveling; coffins, or winding sheets for the
dead, *etc*.

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Other portions utilized were sinews, which furnished
fiber for ropes, thread, bow-strings, snow-shoe webs,
*etc*.; hair, which was sometimes made into belts
and ornaments; “buffalo chips,” which formed
a valuable and highly-prized fuel; bones, from which
many articles of use and ornament were made; horns,
which were made into spoons, drinking vessels, *etc*.
  
After the United States Government began to support
the buffalo-hunting Indians with annuities and supplies,
the woolen blanket and canvas tent took the place
of the buffalo robe and the skin-covered teepee, and
“Government beef” took the place of buffalo
meat. But the slaughter of buffaloes went on
just the same, and the robes and hides taken were
traded for useless and often harmful luxuries, such
as canned provisions, fancy knickknacks, whisky, fire-arms
of the most approved pattern, and quantities of fixed
ammunition. During the last ten years of the
existence of the herds it is an open question whether
the buffalo did not do our Indians more harm than
good. Amongst the Crows, who were liberally provided
for by the Government, horse racing was a common pastime,
and the stakes were usually dressed buffalo robes.[44]
  
[Note 44: On one occasion, which is doubtless
still remembered with bitterness by many a Crow of
the Custer Agency, my old friend Jim McNaney backed
his horse Ogalalla against the horses of the whole
Crow tribe. The Crows forthwith formed a pool,
which consisted of a huge pile of buffalo robes, worth
about $1,200, and with it backed their best race-horse.
He was forthwith “beaten out of sight”
by Ogalalla, and another grievance was registered
against the whites.]
  
The total disappearance of the buffalo has made no
perceptible difference in the annual cost of the Indians
to the Government. During the years when buffaloes
were numerous and robes for the purchase of fire-arms
and cartridges were plentiful, Indian wars were frequent,
and always costly to the Government. The Indians
were then quite independent, because they could take
the war path at any time and live on buffalo indefinitely.
Now, the case is very different. The last time
Sitting Bull went on the war-path and was driven up
into Manitoba, he had the doubtful pleasure of living
on his ponies and dogs until he became utterly starved
out. Since his last escapade, the Sioux have been
compelled to admit that the game is up and the war-path
is open to them no longer. Should they wish to
do otherwise they know that they could survive only
by killing cattle, and cattle that are guarded by cowboys
and ranchmen are no man’s game. Therefore,
while we no longer have to pay for an annual campaign
in force against hostile Indians, the total absence
of the buffalo brings upon the nation the entire support
of the Indian, and the cash outlay each year is as
great as ever.

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The value of the American bison to civilized man can
never be calculated, nor even fairly estimated.
It may with safety be said, however, that it has been
probably tenfold greater than most persons have ever
supposed. It would be a work of years to gather
statistics of the immense bulk of robes and hides,
undoubtedly amounting to millions in the aggregate;
the thousands of tons of meat, and the train-loads
of bones which have been actually utilized by man.
Nor can the effect of the bison’s presence upon
the general development of the great West ever be
calculated. It has sunk into the great sum total
of our progress, and well nigh lost to sight forever.
  
As a mere suggestion of the immense value of “the
buffalo product” at the time when it had an
existence, I have obtained from two of our leading
fur houses in New York City, with branches elsewhere,
a detailed statement of their business in buffalo
robes and hides during the last few years of the trade.
They not only serve to show the great value of the
share of the annual crop that passed through their
hands, but that of Messrs. J. & A. Boskowitz is of
especial value, because, being carefully itemized
throughout, it shows the decline and final failure
of the trade in exact figures. I am under many
obligations to both these firms for their kindness
in furnishing the facts I desired, and especially
to the Messrs. Boskowitz, who devoted considerable
time and labor to the careful compilation of the annexed
statement of their business in buffalo skins.
 *Memorandum of buffalo robes and hides bought by
Messrs J. & A. Boskowitz, 101-105 Greene Street, New
York, and 202 Lake street, Chicago, from 1876 to 1884.*
+----------------------------------------+
|Year | Buffalo robes. | Buffalo hides. |
| |Number.| Cost. | Number.|Cost. |
+-----+-------+---------+--------+-------+
|1876 | 31,838| $39,620| None.| ... |
|1877 | 9,353| 35,560| None.| ... |
|1878 | 41,268| 150,600| None.| ... |
|1879 | 28,613| 110,420| None.| ... |
|1880 | 34,901| 176,200| 4,570|$13,140|
|1881 | 23,355| 151,800| 26,601| 89,030|
|1882 | 2,124| 15,600| 15,464| 44,140|
|1883 | 6,690| 29,770| 21,869| 67,190|
|1884 | None.| ...| 529| 1,720|
+-----+-------+---------+--------+-------+
|Total|177,142|$709,570 | 69,033|215,220|
+----------------------------------------+
  
Total number of buffalo skins handled in nine years,
246,175; total cost, $924,790.
  
I have also been favored with some very interesting
facts and figures regarding the business done in buffalo
skins by the firm of Mr. Joseph Ullman, exporter and
importer of furs and robes, of 165-107 Mercer street,
New York, and also 353 Jackson street, St. Paul, Minnesota.
The following letter was written me by Mr. Joseph
Ullman on November 12, 1887, for which I am greatly
indebted:
  
“Inasmuch as you particularly desire the figures
for the years 1880-’86, I have gone through
my buffalo robe and hide accounts of those years,
and herewith give you approximate figures, as there
are a good many things to be considered which make
it difficult to give exact figures.

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“In 1881 we handled about 14,000 hides, average
cost about $3.50, and 12,000 robes, average cost about
$7.50.
  
“In 1882 we purchased between 35,000 and 40,000
hides, at an average cost of about $3.50, and about
10,000 robes, at an average cost of about $8.50.
  
“In 1883 we purchased from 6,000 to 7,000 hides
and about 1,500 to 2,000 robes at a slight advance
in price against the year previous.
  
“In 1884 we purchased less than 2,500 hides,
and in my opinion these were such as were carried
over from the previous season in the Northwest, and
were not fresh-slaughtered skins. The collection
of robes this season was also comparatively small,
and nominally robes carried over from 1883.
  
“In 1885 the collection of hides amounted to
little or nothing.
  
“The aforesaid goods were all purchased direct
in the Northwest, that is to say, principally in Montana,
and shipped in care of our branch house at St. Paul,
Minnesota, to Joseph Ullman, Chicago. The robes
mentioned above were Indian-tanned robes and were
mainly disposed of to the jobbing trade both East
and West.
  
“In 1881 and the years prior, the hides were
divided into two kinds, viz, robe hides, which were
such as had a good crop of fur and were serviceable
for robe purposes, and the heavy and short-furred bull
hides. The former were principally sold to the
John S. Way Manufacturing Company, Bridgeport, Connecticut,
and to numerous small robe tanners, while the latter
were sold for leather purposes to various hide-tanners
throughout the United States and Canada, and brought
51/2 to 81/2 cents per pound. A very large proportion
of these latter were tanned by the Wilcox Tanning
Company, Wilcox, Pennsylvania.
  
“About the fall of 1882 we established a tannery
for buffalo robes in Chicago, and from that time forth
we tanned all the good hides which we received into
robes and disposed of them in the same manner as the
Indian-tanned robes.
  
“I don’t know that I am called upon to
express an opinion as to the benefit or disadvantage
of the extermination of the buffalo, but nevertheless
take the liberty to say that I think that some proper
law restricting the unpardonable slaughter of the
buffalo should have been enacted at the time.
It is a well-known fact that soon after the Northern
Pacific Railroad opened up that portion of the country,
thereby making the transportation of the buffalo hides
feasible, that is to say, reducing the cost of freight,
thousands upon thousands of buffaloes were killed
for the sake of the hide alone, while the carcasses
were left to rot on the open plains.
  
“The average prices paid the buffalo hunters
[from 1880 to 1884] was about as follows: For
cow hides [robes!], $3; bull hides, $2.50; yearlings,
$1.50; calves, 75 cents; and the cost of getting the
hides to market brought the cost up to about $3.50
per hide.”

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The amount actually paid out by Joseph Ullman, in
four years, for buffalo robes and hides was about
$310,000, and this, too, long after the great southern
herd had ceased to exist, and when the northern herd
furnished the sole supply. It thus appears that
during the course of eight years business (leaving
out the small sum paid out in 1884), on the part of
the Messrs. Boskowitz, and four years on that of Mr.
Joseph Ullman, these two firms alone paid out the
enormous sum of $1,233,070 for buffalo robes and hides
which they purchased to sell again at a good profit.
By the time their share of the buffalo product reached
the consumers it must have represented an actual money
value of about $2,000,000.
  
Besides these two firms there were at that time many
others who also handled great quantities of buffalo
skins and hides for which they paid out immense sums
of money. In this country the other leading firms
engaged in this business were I. G. Baker & Co., of
Fort Benton; P. B. Weare & Co., Chicago; Obern, Hoosick
& Co., Chicago and Saint Paul; Martin Bates & Co.,
and Messrs. Shearer, Nichols & Co. (now Hurlburt,
Shearer & Sanford), of New York. There were also
many others whose names I am now unable to recall.
  
In the British Possessions and Canada the frontier
business was largely monopolized by the Hudson’s
Bay Fur Company, although the annual “output”
of robes and hides was but small in comparison with
that gathered in the United States, where the herds
were far more numerous. Even in their most fruitful
locality for robes—­the country south of
the Saskatchewan—­this company had a very
powerful competitor in the firm of I. G. Baker & Co.,
of Fort Benton, which secured the lion’s share
of the spoil and sent it down the Missouri River.
  
It is quite certain that the utilization of the buffalo
product, even so far as it was accomplished, resulted
in the addition of several millions of dollars to
the wealth of the people of the United States.
That the total sum, could it be reckoned up, would
amount to at least fifteen millions, seems reasonably
certain; and my own impression is that twenty millions
would be nearer the mark. It is much to be regretted
that the exact truth can never be known, for in this
age of universal slaughter a knowledge of the cash
value of the wild game of the United States that has
been killed up to date might go far toward bringing
about the actual as well as the theoretical protection
of what remains.
  
\* \* \* \*
\*
  
UTILIZATION OF THE BUFFALO BY WHITE MEN.
 *Robes.*—­Ordinarily the skin of a
large ruminant is of little value in comparison with
the bulk of toothsome flesh it covers. In fattening
domestic cattle for the market, the value of the hide
is so insignificant that it amounts to no more than
a butcher’s perquisite in reckoning up the value
of the animal. With the buffalo, however, so
enormous was the waste of the really available product

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that probably nine-tenths of the total value derived
from the slaughter of the animal came from his skin
alone. Of this, about four-fifths came from the
utilization of the furry robe and one-fifth from skins
classed as “hides,” which were either
taken in the summer season, when the hair was very
short or almost absent, and used for the manufacture
of leather and leather goods, or else were the poorly-furred
skins of old bulls.
  
The season for robe-taking was from October 15 to
February 15, and a little later in the more northern
latitudes. In the United States the hair of the
buffalo was still rather short up to the first of November;
but by the middle of November it was about at its finest
as to length, density, color, and freshness.
The Montana hunters considered that the finest robes
were those taken from November 15 to December 15.
Before the former date the hair had not quite attained
perfection in length, and after the latter it began
to show wear and lose color. The winter storms
of December and January began to leave their mark upon
the robes by the 1st of February, chiefly by giving
the hair a bleached and weathered appearance.
By the middle of February the pelage was decidedly
on the wane, and the robe-hunter was also losing his
energy. Often, however, the hunt was kept up
until the middle of March, until either the deterioration
of the quality of the robe, the migration of the herds
northward, or the hunter’s longing to return
“to town” and “clean up,”
brought the hunt to an end.
  
On the northern buffalo range, the hunter, or “buffalo
skinner,” removed the robe in the following
manner:
  
When the operator had to do his work alone, which
was almost always the case, he made haste to skin
his victims while they were yet warm, if possible,
and before *rigor mortis* had set in; but, at
all hazards, before they should become hard frozen.
With a warm buffalo he could easily do his work single-handed,
but with one rigid or frozen stiff it was a very different
matter.
  
His first act was to heave the carcass over until
it lay fairly upon its back, with its feet up in the
air. To keep it in that position he wrenched
the head violently around to one side, close against
the shoulder, at the point where the hump was highest
and the tendency to roll the greatest, and used it
very effectually as a chock to keep the body from
rolling back upon its side. Having fixed the carcass
in position he drew forth his steel, sharpened his
sharp-pointed “ripping-knife,” and at
once proceeded to make all the opening cuts in the
skin. Each leg was girdled to the bone, about
8 inches above the hoof, and the skin of the leg ripped
open from that point along the inside to the median
line of the body. A long, straight cut was then
made along the middle of the breast and abdomen, from
the root of the tail to the chin. In skinning
cows and young animals, nothing but the skin of the
forehead and nose was left on the skull, the skin of

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the throat and cheeks being left on the hide; but
in skinning old bulls, on whose heads the skin was
very thick and tough, the whole head was left unskinned,
to save labor and time. The skin of the neck was
severed in a circle around the neck, just behind the
ears. It is these huge heads of bushy brown hair,
looking, at a little distance, quite black, in sharp
contrast with the ghastly whiteness of the perfect
skeletons behind them, which gives such a weird and
ghostly appearance to the lifeless prairies of Montana
where the bone-gatherer has not yet done his perfect
work. The skulls of the cows and young buffaloes
are as clean and bare as if they had been carefully
macerated, and bleached by a skilled osteologist.
  
[Illustration: FIG. 1. A DEAD BULL.
From a photograph by L. A. Huffman.]
  
[Illustration: FIG. 2. BUFFALO SKINNERS
AT WORK. From a photograph by L. A. Huffman.]
  
The opening cuts having been made, the broad-pointed
“skinning-knife” was duly sharpened, and
with it the operator fell to work to detach the skin
from the body in the shortest possible time. The
tail was always skinned and left on the hide.
As soon as the skin was taken off it was spread out
on a clean, smooth, and level spot of ground, and stretched
to its fullest extent, inside uppermost. On the
northern range, very few skins were “pegged
out,” *i. e.*, stretched thoroughly and
held by means of wooden pegs driven through the edges
of the skin into the earth. It was practiced
to a limited extent on the southern range during the
latter part of the great slaughter, when buffaloes
were scarce and time abundant. Ordinarily, however,
there was no time for pegging, nor were pegs available
on the range to do the work with. A warm skin
stretched on the curly buffalo-grass, hair side down,
sticks to the ground of itself until it has ample
time to harden. On the northern range the skinner
always cut the initials of his outfit in the thin subcutaneous
muscle which was always found adhering to the skin
on each side, and which made a permanent and very
plain mark of ownership.
  
In the south, the traders who bought buffalo robes
on the range sometimes rigged up a rude press, with
four upright posts and a huge lever, in which robes
that had been folded into a convenient size were pressed
into bales, like bales of cotton. These could
be transported by wagon much more economically than
could loose robes. An illustration of this process
is given in an article by Theodore R. Davis, entitled
“The Buffalo Range,” in *Harper’s
Magazine* for January, 1869, Vol. xxxviii, p. 163.
The author describes the process as follows:
  
“As the robes are secured, the trader has them
arranged in lots of ten each, with but little regard
for quality other than some care that particularly
fine robes do not go too many in one lot. These
piles are then pressed into a compact bale by means
of a rudely constructed affair composed of saplings
and a chain.”

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On the northern range, skins were not folded until
the time came to haul them in. Then the hunter
repaired to the scene of his winter’s work,
with a wagon surmounted by a hay-rack (or something
like it), usually drawn by four horses. As the
skins were gathered up they were folded once, lengthwise
down the middle, with the hair inside. Sometimes
as many as 100 skins were hauled at one load by four
horses.
  
On one portion of the northern range the classification
of buffalo peltries was substantially as follows:
Under the head *of robes* was included all cow
skins taken during the proper season, from one year
old upward, and all bull skins from one to three years
old. Bull skins over three years of age were
classed as *hides*, and while the best of them
were finally tanned and used as robes, the really poor
ones were converted into leather. The large robes,
when tanned, were used very generally throughout the
colder portions of North America as sleigh robes and
wraps, and for bedding in the regions of extreme cold.
The small robes, from the young animals, and likewise
many large robes, were made into overcoats, at once
the warmest and the most cumbersome that ever enveloped
a human being. Thousands of old bull robes were
tanned with the hair on, and the body portions were
made into overshoes, with the woolly hair inside—­absurdly
large and uncouth, but very warm.
  
I never wore a pair of buffalo overshoes without being
torn by conflicting emotions—­mortification
at the ridiculous size of my combined foot-gear, big
boots inside of huge overshoes, and supreme comfort
derived from feet that were always warm.
  
Besides the ordinary robe, the hunters and fur buyers
of Montana recognized four special qualities, as follows:
  
The “beaver robe,” with exceedingly fine,
wavy fur, the color of a beaver, and having long,
coarse, straight hairs coming through it. The
latter were of course plucked out in the process of
manufacture. These were very rare. In 1882
Mr. James McNaney took one, a cow robe, the only one
out of 1,200 robes taken that season, and sold it for
$75, when ordinary robes fetched only $3.50.
  
The “black-and-tan robe” is described
as having the nose, flanks, and inside of fore legs
black-and-tan (whatever that may mean), while the
remainder of the robe is jet black.
  
A “buckskin robe” is from what is always
called a “white buffalo,” and is in reality
a dirty cream color instead of white. A robe of
this character sold in Miles City in 1882 for $200,
and was the only one of that character taken on the
northern range during that entire winter. A very
few pure white robes have been taken, so I have been
told, chiefly by Indians, but I have never seen one.
  
A “blue robe” or “mouse-colored
(?) robe” is one on which the body color shows
a decidedly bluish cast, and at the same time has long,
fine fur. Out of his 1,200 robes taken in 1882,
Mr. McNaney picked out 12 which passed muster as the
much sought for blue robes, and they sold at $16 each.

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As already intimated, the price paid on the range
for ordinary buffalo skins varied according to circumstances,
and at different periods, and in different localities,
ranged all the way from 65 cents to $10. The
latter figure was paid in Texas in 1887 for the last
lot of “robes” ever taken. The lowest
prices ever paid were during the tremendous slaughter
which annihilated the southern herd. Even as late
as 1876, in the southern country, cow robes brought
on the range only from 65 to 90 cents, and bull robes
$1.15. On the northern range, from 1881 to 1883,
the prices paid were much higher, ranging from $2.50
to $4.
  
[Illustration: FIG. 1. FIVE MINUTES’
WORK. Photographed by L. A. Huffman.]
  
[Illustration: FIG. 2. SCENE ON THE NORTHERN
BUFFALO RANGE. Photographed by L. A. Huffman.]
  
A few hundred dressed robes still remain in the hands
of some of the largest fur dealers in New York, Chicago,
and Montreal, which can be purchased at prices much
lower than one would expect, considering the circumstances.
In 1888, good robes, Indian tanned, were offered in
New York at prices ranging from $15 to $30, according
to size and quality, but in Montreal no first-class
robes were obtainable at less than $40.
 *Hides.*—­Next in importance to robes
was the class of skins known commercially as hides.
Under this head were classed all skins which for any
reason did not possess the pelage necessary to a robe,
and were therefore fit only for conversion into leather.
Of these, the greater portion consisted of the skins
of old bulls on which the hair was of poor quality
and the skin itself too thick and heavy to ever allow
of its being made into a soft, pliable, and light-weight
robe. The remaining portion of the hides marketed
were from buffaloes killed in spring and summer, when
the body and hindquarters ware almost naked.
Apparently the quantity of summer-killed hides marketed
was not very great, for it was only the meanest and
most unprincipled ones of the grand army of buffalo-killers
who were mean enough to kill buffaloes in summer simply
for their hides. It is said that at one time
summer-killing was practiced on the southern range
to an extent that became a cause for alarm to the
great body of more respectable hunters, and the practice
was frowned upon so severely that the wretches who
engaged in it found it wise to abandon it.
 *Bones.*—­Next in importance to robes
and hides was the bone product, the utilization of
which was rendered possible by the rigorous climate
of the buffalo plains. Under the influence of
the wind and sun and the extremes of heat and cold,
the flesh remaining upon a carcass dried up, disintegrated,
and fell to dust, leaving the bones of almost the entire
skeleton as clean and bare as if they had been stripped
of flesh by some powerful chemical process. Very
naturally, no sooner did the live buffaloes begin
to grow scarce than the miles of bleaching’ bones
suggested the idea of finding a use for them.
A market was readily found for them in the East, and
the prices paid per ton were sufficient to make the
business of bone-gathering quite remunerative.
The bulk of the bone product was converted into phosphate
for fertilizing purposes, but much of it was turned
into carbon for use in the refining of sugar.

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The gathering of bones became a common industry as
early as 1872, during which year 1,135,300 pounds
were shipped over the Atchison, Topeka and Santa Fé
Railroad. In the year following the same road
shipped 2,743,100 pounds, and in 1874 it handled 6,914,950
pounds more. This trade continued from that time
on until the plains have been gleaned so far back
from the railway lines that it is no longer profitable
to seek them. For that matter, however, it is
said that south of the Union Pacific nothing worth
the seeking now remains.
  
The building of the Northern Pacific Railway made
possible the shipment of immense quantities of dry
bones. Even as late as 1886 overland travelers
saw at many of the stations between Jamestown, Dakota,
and Billings, Montana, immense heaps of bones lying
alongside the track awaiting shipment. In 1885
a single firm shipped over 200 tons of bones from
Miles City.
  
The valley of the Missouri River was gleaned by teamsters
who gathered bones from as far back as 100 miles and
hauled them to the river for shipment on the steamers.
An operator who had eight wagons in the business informed
me that in order to ship bones on the river steamers
it was necessary to crush them, and that for crushed
bones, shipped in bags, a Michigan fertilizer company
paid $18 per ton. Uncrushed bones, shipped by
the railway, sold for $12 per ton.
  
It is impossible to ascertain the total amount or
value of the bone product, but it is certain that
it amounted to many thousand tons, and in value must
have amounted to some hundreds of thousands of dollars.
But for the great number of railroads, river steamers,
and sea-going vessels (from Texas ports) engaged in
carrying this product, it would have cut an important
figure in the commerce of the country, but owing to
the many interests between which it was divided it
attracted little attention.
 *Meat.*—­The amount of fresh buffalo
meat cured and marketed was really very insignificant.
So long as it was to be had at all it was so very
abundant that it was worth only from 2 to 3 cents per
pound in the market, and many reasons combined to
render the trade in fresh buffalo meat anything but
profitable. Probably not more than one one-thousandth
of the buffalo meat that might have been saved and
utilized was saved. The buffalo carcasses that
were wasted on the great plains every year during
the two great periods of slaughter (of the northern
and southern herds) would probably have fed to satiety
during the entire time more than a million persons.
  
As to the quality of buffalo meat, it may be stated
in general terms that it differs in no way whatever
from domestic beef of the same age produced by the
same kind of grass. Perhaps there is no finer
grazing ground in the world than Montana, and the
beef it produces is certainly entitled to rank with
the best. There are many persons who claim to
recognize a difference between the taste of buffalo

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meat and domestic beef; but for my part I do not believe
any difference really exists, unless it is that the
flesh of the buffalo is a little sweeter and more
juicy. As for myself, I feel certain I could not
tell the difference between the flesh of a three-year
old buffalo and that of a domestic beef of the same
age, nor do I believe any one else could, even on a
wager. Having once seen a butcher eat an elephant
steak in the belief that it was beef from his own
shop, and another butcher eat *loggerhead turtle*
steak for beef, I have become somewhat skeptical in
regard to the intelligence of the human palate.
  
As a matter of experiment, during our hunt for buffalo
we had buffalo meat of all ages, from one year up
to eleven, cooked in as many different ways as our
culinary department could turn out. We had it
broiled, fried with batter, roasted, boiled, and stewed.
The last method, when employed upon slices of meat
that had been hacked from a frozen hind-quarter, produced
results that were undeniably tough and not particularly
good. But it was an unfair way to cook any kind
of meat, and may be guarantied to spoil the finest
beef in the world.
  
Hump meat from a cow buffalo not too old, cut in slices
and fried in batter, *a la cowboy*, is delicious—­a
dish fit for the gods. We had tongues in plenty,
but the ordinary meat was so good they were not half
appreciated. Of course the tenderloin was above
criticism, and even the round steaks, so lightly esteemed
by the epicure, were tender and juicy to a most satisfactory
degree.
  
It has been said that the meat of the buffalo has
a coarser texture or “grain” than domestic
beef. Although I expected to find such to be the
case, I found no perceptible difference whatever, nor
do I believe that any exists. As to the distribution
of fat I am unable to say, for the reason that our
buffaloes were not fat.
  
It is highly probable that the distribution of fat
through the meat, so characteristic of the shorthorn
breeds, and which has been brought about only by careful
breeding, is not found in either the beef of the buffalo
or common range cattle. In this respect, shorthorn
beef no doubt surpasses both the others mentioned,
but in all other points, texture, flavor, and general
tenderness, I am very sure it does not.
  
It is a great mistake for a traveler to kill a patriarchal
old bull buffalo, and after attempting to masticate
a small portion of him to rise up and declare that
buffalo meat is coarse, tough, and dry. A domestic
bull of the same age would taste as tough. It
is probably only those who have had the bad taste
to eat bull-beef who have ever found occasion to asperse
the reputation of *Bison americanus* as a beef
animal.
  
Until people got tired of them, buffalo tongues were
in considerable demand, and hundreds, if not even
thousands, of barrels of them were shipped east from
the buffalo country.

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*Pemmican.*—­Out of the enormous waste
of good buffalo flesh one product stands forth as
a redeeming feature—­pemmican. Although
made almost exclusively by the half-breeds and Indians
of the Northwest it constituted a regular article
of commerce of great value to overland travelers,
and was much sought for as long as it was produced.
Its peculiar “staying powers,” due to
the process of its manufacture, which yielded a most
nourishing food in a highly condensed form, made it
of inestimable value to the overland traveler who
must travel light or not at all. A handful of
pemmican was sufficient food to constitute a meal
when provisions were at all scarce. The price
of pemmican in Winnipeg was once as low as 2d. per
pound, but in 1883 a very small quantity which was
brought in sold at 10 cents per pound. This was
probably the last buffalo pemmican made. H. M.
Robinson states that in 1878 pemmican was worth 1s.
3d. per pound.
  
The manufacture of pemmican, as performed by the Red
River half-breeds, was thus described by the Rev.
Mr. Belcourt, a Catholic priest, who once accompanied
one of the great buffalo-hunting expeditions:[45]
  
[Note 45: Schoolcraft’s History, Condition
and Prospects of the Indian Tribes, iv, p. 107.]
  
“Other portions which are destined to be made
into pimikehigan, or pemmican, are exposed to an ardent
heat, and thus become brittle and easily reducible
to small particles by the use of a flail, the buffalo-hide
answering the purpose of a threshing-floor. The
fat or tallow, being cut up and melted in large kettles
of sheet iron, is poured upon this pounded meat, and
the whole mass is worked together with shovels until
it is well amalgamated, when it is pressed, while
still warm, into bags made of buffalo skin, which are
strongly sewed up, and the mixture gradually cools
and becomes almost as hard as a rock. If the
fat used in this process is that taken from the parts
containing the udder, the meat is called fine pemmican.
In some cases, dried fruits, such as the prairie pear
and cherry, are intermixed, which forms what is called
seed pemmican. Tho lovers of good eating judge
the first described to be very palatable; the second,
better; the third, excellent. A taurean of pemmican
weighs from 100 to 110 pounds. Some idea may
be formed of the immense destruction of buffalo by
these people when it is stated that a whole cow yields
one-half a bag of pemmican and three fourths of a
bundle of dried meat; so that the most economical
calculate that from eight to ten cows are required
for the load of a single vehicle.”
  
It is quite evident from the testimony of disinterested
travelers that ordinary pemmican was not very palatable
to one unaccustomed to it as a regular article of
food. To the natives, however, especially the
Canadian *voyageur*, it formed one of the most
valuable food products of the country, and it is said
that the demand for it was generally greater than
the supply.

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*Dried, or “jerked” meat.*—­The
most popular and universal method of curing buffalo
meat was to cut it into thin flakes, an inch or less
in thickness and of indefinite length, and without
salting it in the least to hang it over poles, ropes,
wicker-frames, or even clumps of standing sage brush,
and let it dry in the sun. This process yielded
the famous “jerked” meat so common throughout
the West in the early days, from the Rio Grande to
the Saskatchewan. Father Belcourt thus described
the curing process as it was practiced by the half-breeds
and Indians of the Northwest:
  
“The meat, when taken to camp, is cut by the
women into long strips about a quarter of an inch
thick, which are hung upon the lattice-work prepared
for that purpose to dry. This lattice-work is
formed of small pieces of wood, placed horizontally,
transversely, and equidistant from each other, not
unlike an immense gridiron, and is supported by wooden
uprights (trepieds). In a few days the meat is
thoroughly desiccated, when it is bent into proper
lengths and tied into bundles of 60 or 70 pounds weight.
This is called dried meat (viande seche). To make
the hide into parchment (so called) it is stretched
on a frame, and then scraped on the inside with a
piece of sharpened bone and on the outside with a
small but sharp-curved iron, proper to remove the hair.
This is considered, likewise, the appropriate labor
of women. The men break the bones, which are
boiled in water to extract the marrow to be used for
frying and other culinary purposes. The oil is
then poured into the bladder of the animal, which
contains, when filled, about 12 pounds, being the
yield of the marrow-bones of two buffaloes.”
  
In the Northwest Territories dried meat, which formerly
sold at 2\_d.\_ per pound, was worth in 1878 10\_d.\_
per pound.
  
Although I have myself prepared quite a quantity of
jerked buffalo meat, I never learned to like it.
Owing to the absence of salt in its curing, the dried
meat when pounded and made into a stew has a “far
away” taste which continually reminds one of
hoofs and horns. For all that, and despite its
resemblance in flavor to Liebig’s Extract of
Beef, it is quite good, and better to the taste than
ordinary pemmican.
  
The Indians formerly cured great quantities of buffalo
meat in this way—­in summer, of course,
for use in winter—­but the advent of that
popular institution called “Government beef”
long ago rendered it unnecessary for the noble red
man to exert his squaw in that once honorable field
of labor.
  
During the existence of the buffalo herds a few thrifty
and enterprising white men made a business of killing
buffaloes in summer and drying the meat in bulk, in
the same manner which to-day produces our popular
“dried beef.” Mr. Allen states that
“a single hunter at Hays City shipped annually
for some years several hundred barrels thus prepared,
which the consumers probably bought for ordinary beef.”

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*Uses of bison’s hair.*—­Numerous
attempts have been made to utilize the woolly hair
of the bison in the manufacture of textile fabrics.
As early as 1729 Col. William Byrd records the
fact that garments were made of this material, as
follows:
  
“The Hair growing upon his Head and Neck is
long and Shagged, and so Soft that it will spin into
Thread not unlike Mohair, and might be wove into a
sort of Camlet. Some People have Stockings knit
of it, that would have served an Israelite during
his forty Years march thro’ the Wilderness."[46]
  
[Note 46: Westover MSS., i, p. 172.]
  
In 1637 Thomas Morton published, in his “New
English Canaan,” p. 98,[47] the following reference
to the Indians who live on the southern shore of Lake
Erocoise, supposed to be Lake Ontario:
  
[Note 47: Quoted by Professor Allen, “American
Bisons,” p. 107.]
  
“These Beasts [buffaloes, undoubtedly] are of
the bignesse of a Cowe, their flesh being very good
foode, their hides good lether, their fleeces very
usefull, being a kind of wolle, as fine as the wolle
of the Beaver, and the Salvages doe make garments
thereof.”
  
Professor Allen quotes a number of authorities who
have recorded statements in regard to the manufacture
of belts, garters, scarfs, sacks, *etc*., from
buffalo wool by various tribes of Indians.[48] He also
calls attention to the only determined efforts ever
made by white men on a liberal scale for the utilization
of buffalo “wool” and its manufacture
into cloth, an account of which appears in Ross’s
“Red River Settlement,” pp. 69-72.
In 1821 some of the more enterprising of the Red River
(British) colonists conceived the idea of making fortunes
out of the manufacture of woolen goods from the fleece
of the buffalo, and for that purpose organized the
Buffalo Wool Company, the principal object of which
was declared to be “to provide a substitute for
wool, which substitute was to be the wool of the wild
buffalo, which was to be collected in the plains and
manufactured both for the use of the colonists and
for export.” A large number of skilled workmen
of various kinds were procured from England, and also
a plant of machinery and materials. When too
late, it was found that the supply of buffalo wool
obtainable was utterly insufficient, the raw wool costing
the company 1\_s.\_ 6\_d.\_ per pound, and cloth which
it cost the company £2 10\_s.\_ per yard to produce
was worth only 4\_s.\_ 6\_d.\_ per yard in England.
The historian states that universal drunkenness on
the part of all concerned aided very materially in
bringing about the total failure of the enterprise
in a very short time.
  
[Note 48: The American Bison, p. 197.]
  
While it is possible to manufacture the fine, woolly
fur of the bison into cloth or knitted garments, provided
a sufficient supply of the raw material could be obtained
(which is and always has been impossible), nothing
could be more visionary than an attempt to thus produce
salable garments at a profit.

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Articles of wearing apparel made of buffalo’s
hair are interesting as curiosities, for their rarity
makes them so, but that is the only end they can ever
serve so long as there is a sheep living.
  
In the National Museum, in the section of animal products,
there is displayed a pair of stockings made in Canada
from the finest buffalo wool, from the body of the
animal. They are thick, heavy, and full of the
coarse, straight hairs, which it seems can never be
entirely separated from the fine wool. In general
texture they are as coarse as the coarsest sheep’s
wool would produce.
  
With the above are also displayed a rope-like lariat,
made by the Comanche Indians, and a smaller braided
lasso, seemingly a sample more than a full-grown lariat,
made by the Otoe Indians of Nebraska. Both of
the above are made of the long, dark-brown hair of
the head and shoulders, and in spite of the fact that
they have been twisted as hard as possible, the ends
of the hairs protrude so persistently that the surface
of each rope is extremely hairy.
 *Buffalo chips.*—­Last, but by no means
least in value to the traveler on the treeless plains,
are the droppings of the buffalo, universally known
as “buffalo chips.” When over one
year old and thoroughly dry, this material makes excellent
fuel. Usually it occurs only where fire-wood
is unobtainable, and thousands of frontiersmen have
a million times found it of priceless value.
When dry, it catches easily, burns readily, and makes
a hot fire with but very little smoke, although it
is rapidly consumed. Although not as good for
a fire as even the poorest timber it is infinitely
better than sage-brush, which, in the absence of chips,
is often the traveler’s last resort.
  
It usually happens that chips are most-abundant in
the sheltered creek-bottoms and near the water-holes,
the very situations which travelers naturally select
for their camps. In these spots the herds have
gathered either for shelter in winter or for water
in summer, and remained in a body for some hours.
And now, when the cowboy on the round-up, the surveyor,
or hunter, who must camp out, pitches his tent in
the grassy coulée or narrow creek-bottom, his first
care is to start out with his largest gunning bag
to “rustle some buffalo chips” for a campfire.
He, at least, when he returns well laden with the spoil
of his humble chase, still has good reason to remember
the departed herd with feelings of gratitude.
Thus even the last remains of this most useful animal
are utilized by man in providing for his own imperative
wants.

**IX.  THE PRESENT VALUE OF THE BISON TO CATTLE-GROWERS.**

*The bison in captivity and domestication.*—­Almost
from time immemorial it has been known that the American
bison takes kindly to captivity, herds contentedly
with domestic cattle, and crosses with them with the
utmost readiness. It was formerly believed, and
indeed the tradition prevails even now to quite an
extent, that on account of the hump on the shoulders
a domestic cow could not give birth to a half-breed
calf. This belief is entirely without foundation,
and is due to theories rather than facts.

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Numerous experiments in buffalo breeding have been
made, and the subject is far from being a new one.
As early as 1701 the Huguenot settlers at Manikintown,
on the James River, a few miles above Richmond, began
to domesticate buffaloes. It is also a matter
of historical record that in 1786, or thereabouts,
buffaloes were domesticated and bred in captivity
in Virginia, and Albert Gallatin states that in some
of the northwestern counties the mixed breed was quite
common. In 1815 a series of elaborate and valuable
experiments in cross-breeding the buffalo and domestic
cattle was begun by Mr. Robert Wickliffe, of Lexington,
Ky., and continued by him for upwards of thirty years.[49]
  
[Note 49: For a full account of Mr. Wickliffe’s
experiments, written by himself, see Audubon and Bachman’s
“Quadrupeds of North America,” vol. ii,
pp. 52-54.]
  
Quite recently the buffalo-breeding operations of
Mr. S. L. Bedson, of Stony Mountain, Manitoba, and
Mr. C. J. Jones, of Garden City, Kans., have attracted
much attention, particularly for the reason that the
efforts of both these gentlemen have been directed
toward the practical improvement of the present breeds
of range cattle. For this reason the importance
of the work in which they are engaged can hardly be
overestimated, and the results already obtained by
Mr. Bedson, whose experiments antedate those of Mr.
Jones by several years, are of the greatest interest
to western cattle-growers. Indeed, unless the
stock of pure-blood buffaloes now remaining proves
insufficient for the purpose, I fully believe that
we will gradually see a great change wrought in the
character of western cattle by the introduction of
a strain of buffalo blood.
  
The experiments which have been made thus far prove
conclusively that—­
  
(1) The male bison crosses readily with the opposite
sex of domestic cattle, but a buffalo cow has never
been known to produce a half-breed calf.
  
(2) The domestic cow produces a half-breed calf successfully.
  
(3) The progeny of the two species is fertile to any
extent, yielding half-breeds, quarter, three-quarter
breeds, and so on.
  
(4) The bison breeds in captivity with perfect regularity
and success.
 *Need of an improvement in range cattle.*—­Ever
since the earliest days of cattle-ranching in the
West, stockmen have had it in their power to produce
a breed which would equal in beef-bearing qualities
the best breeds to be found upon the plains, and be
so much better calculated to survive the hardships
of winter, that their annual losses would have been
very greatly reduced. Whenever there is an unusually
severe winter, such as comes about three times in
every decade, if not even oftener, range cattle perish
by thousands. It is an absolute impossibility
for every ranchman who owns several thousand, or even
several hundred, head of cattle to provide hay for
them, even during the severest portion of the winter

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season, and consequently the cattle must depend wholly
upon their own resources. When the winter is
reasonably mild, and the snows never very deep, nor
lying too long at a time on the ground, the cattle
live through the winter with very satisfactory success.
Thanks to the wind, it usually happens that the falling
snow is blown off the ridges as fast as it falls,
leaving the grass sufficiently uncovered for the cattle
to feed upon it. If the snow-fall is universal,
but not more than a few inches in depth, the cattle
paw through it here and there, and eke out a subsistence,
on quarter rations it may be, until a friendly chinook
wind sets in from the southwest and dissolves the snow
as if by magic in a few hours’ time.
  
But when a deep snow comes, and lies on the ground
persistently, week in and week out, when the warmth
of the sun softens and moistens its surface sufficiently
for a returning cold wave to freeze it into a hard
crust, forming a universal wall of ice between the
luckless steer and his only food, the cattle starve
and freeze in immense numbers. Being totally
unfitted by nature to survive such unnatural conditions,
it is not strange that they succumb.
  
Under present conditions the stockman simply stakes
his cattle against the winter elements and takes his
chances on the results, which are governed by circumstances
wholly beyond his control. The losses of the
fearful winter of 1886-’87 will probably never
be forgotten by the cattlemen of the great Western
grazing ground. In many portions of Montana and
Wyoming the cattlemen admitted a loss of 50 per cent
of their cattle, and in some localities the loss was
still greater. The same conditions are liable
to prevail next winter, or any succeeding winter,
and we may yet see more than half the range cattle
in the West perish in a single month.
  
Yet all this time the cattlemen have had it in their
power, by the easiest and simplest method in the world,
to introduce a strain of hardy native blood in their
stock which would have made it capable of successfully
resisting a much greater degree of hunger and cold.
It is really surprising that the desirability of cross-breeding
the buffalo and domestic cattle should for so long
a time have been either overlooked or disregarded.
While cattle-growers generally have shown the greatest
enterprise in producing special breeds for milk, for
butter, or for beef, cattle with short horns and cattle
with no horns at all, only two or three men have had
the enterprise to try to produce a breed particularly
hardy and capable.
  
A buffalo can weather storms and outlive hunger and
cold which would kill any domestic steer that ever
lived. When nature placed him on the treeless
and blizzard-swept plains, she left him well equipped
to survive whatever natural conditions he would have
to encounter. The most striking feature of his
entire *tout ensemble* is his magnificent suit
of hair and fur combined, the warmest covering possessed

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by any quadruped save the musk-ox. The head,
neck, and fore quarters are clothed with hide and
hair so thick as to be almost, if not entirely, impervious
to cold. The hair on the body and hind quarters
is long, fine, very thick, and of that peculiar woolly
quality which constitutes the best possible protection
against cold. Let him who doubts the warmth of
a good buffalo robe try to weather a blizzard with
something else, and then try the robe. The very
form of the buffalo—­short, thick legs,
and head hung very near the ground—­suggests
most forcibly a special fitness to wrestle with mother
earth for a living, snow or no snow. A buffalo
will flounder for days through deep snow-drifts without
a morsel of food, and survive where the best range
steer would literally freeze on foot, bolt upright,
as hundreds did in the winter of 1886-’87.
While range cattle turn tail to a blizzard and drift
helplessly, the buffalo faces it every time, and remains
master of the situation.
  
It has for years been a surprise to me that Western
stockmen have not seized upon the opportunity presented
by the presence of the buffalo to improve the character
of their cattle. Now that there are no longer
any buffalo calves to be had on the plains for the
trouble of catching them, and the few domesticated
buffaloes that remain are worth fabulous prices, we
may expect to see a great deal of interest manifested
in this subject, and some costly efforts made to atone
for previous lack of forethought.
 *The character of the buffalo-domestic hybrid.*—­The
subjoined illustration from a photograph kindly furnished
by Mr. C. J. Jones, represents a ten months’
old half-breed calf (male), the product of a buffalo
bull and domestic cow. The prepotency of the sire
is apparent at the first glance, and to so marked
an extent that the illustration would pass muster
anywhere as having been drawn from a full-blood buffalo.
The head, neck, and hump, and the long woolly hair
that covers them, proclaim the buffalo in every line.
Excepting that the hair on the shoulders (below the
hump) is of the same length as that on the body and
hind quarters, there is, so far as one can judge from
an excellent photograph, no difference whatever observable
between this lusty young half-breed and a full blood
buffalo calf of the same age and sex. Mr. Jones
describes the color of this animal as “iron-gray,”
and remarks: “You will see how even the
fur is, being as long on the hind parts as on the
shoulders and neck, very much unlike the buffalo, which
is so shaggy about the shoulders and so thin farther
back.” Upon this point it is to be remarked
that the hair on the body of a yearling or two year-old
buffalo is always very much longer in proportion to
the hair on the forward parts than it is later in
life, and while the shoulder hair is always decidedly
longer than that back of it, during the first two years
the contrast is by no means so very great. A reference
to the memoranda of hair measurements already given
will afford precise data on this point.

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In regard to half-breed calves, Mr. Bedson states
in a private letter that “the hump does not
appear until several months after birth.”
  
Altogether, the male calf described above so strongly
resembles a pure-blood buffalo as to be generally
mistaken for one; the form of the adult half-blood
cow promptly proclaims her origin. The accompanying
plate, also from a photograph supplied by Mr. Jones,
accurately represents a half-breed cow, six years
old, weighing about 1,800 pounds. Her body is
very noticeably larger in proportion than that of the
cow buffalo, her pelvis much heavier, broader, and
more cow-like, therein being a decided improvement
upon the small and weak hind quarters of the wild
species. The hump is quite noticeable, but is
not nearly so high as in the pure buffalo cow.
The hair on the fore quarters, neck, and head is decidedly
shorter, especially on the head; the frontlet and chin
beard being conspicuously lacking. The tufts of
long, coarse, black hair which clothe the fore-arm
of the buffalo cow are almost absent, but apparently
the hair on the body and hind quarters has lost but
little, if any, of its length, density, and fine,
furry quality. The horns are decidedly cow-like
in their size, length, and curvature.
  
[Illustration: HALF-BREED (BUFFALO-DOMESTIC)
CALF.—­HERD OF C. J. JONES, GARDEN CITY,
KANSAS. Drawn by Ernest E. Thompson.]
  
Regarding the general character of the half-breed
buffalo, and his herd in general, Mr. Bedson writes
me as follows, in a letter dated September 12, 1888:
  
“The nucleus of my herd consisted of a young
buffalo bull and four heifer calves, which I purchased
in 1877, and the increase from these few has been
most rapid, as will be shown by a tabular statement
farther on.
  
“Success with the breeding of the pure buffalo
was followed by experiments in crossing with the domestic
animal. This crossing has generally been between
a buffalo bull and an ordinary cow, and with the most
encouraging results, since it had been contended by
many that although the cow might breed a calf from
the buffalo, yet it would be at the expense of her
life, owing to the hump on a buffalo’s shoulder;
but this hump does not appear until several months
after birth. This has been proved a fallacy respecting
*this herd* at least, for calving has been attended
with no greater percentage of losses than would be
experienced in ranching with the ordinary cattle.
Buffalo cows and crosses have dropped calves at as
low a temperature as 20° below zero, and the calves
were sturdy and healthy.
  
“The half breed resulting from the cross as
above mentioned has been again crossed with the thoroughbred
buffalo bull, producing a three quarter breed animal
closely resembling the buffalo, the head and robe
being quite equal, if not superior. The half-breeds
are very prolific. The cows drop a calf annually.
They are also very hardy indeed, as they take the
instinct of the buffalo during the blizzards and storms,

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and do not drift like native cattle. They remain
upon the open prairie during our severest winters,
while the thermometer ranges from 30 to 40 degrees
below zero, with little or no food except what they
rustled on the prairie, and no shelter at all.
In nearly all the ranching parts of North America
foddering and housing of cattle is imperative in a
more or less degree,[50] creating an item of expense
felt by all interested in cattle-raising; but the
buffalo [half]breed retains all its native hardihood,
needs no housing, forages in the deepest snows for
its own food, yet becomes easily domesticated, and
consequently needs but little herding. Therefore
the progeny of the buffalo is easily reared, cheaply
fed, and requires no housing in winter; three very
essential points in stock-raising.
  
[Note 50: On nearly all the great cattle ranches
of the United States it is absolutely impossible,
and is not even attempted.—­W. T. H.]
  
“They are always in good order, and I consider
the meat of the half-breed much preferable to domestic
animals, while the robe is very fine indeed, the fur
being evened up on the hind parts, the same as on
the shoulders. During the history of the herd,
accident and other causes have compelled the slaughtering
of one or two, and in these instances the carcasses
have sold for 18 cents per pound; the hides in their
dressed state for $50 to $75 each. A half-breed
buffalo ox (four years old, crossed with buffalo bull
and Durham cow) was killed last winter, and weighed
1,280 pounds dressed beef. One pure buffalo bull
now in my herd weighs fully 2,000 pounds, and a [half]breed
bull 1,700 to 1,800 pounds.
  
“The three-quarter breed is an enormous animal
in size, and has an extra good robe, which will readily
bring $40 to $50 in any market where there is a demand
for robes. They are also very prolific, and I
consider them the coming cattle for our range cattle
for the Northern climate, while the half and quarter
breeds will be the animals for the more Southern district.
The half and three-quarter breed cows, when really
matured, will weigh from 1,400 to 1,800 pounds.
  
“I have never crossed them except with a common
grade of cows, while I believe a cross with the Galloways
would produce the handsomest robe ever handled, and
make the best range cattle in the world. I have
not had time to give my attention to my herd, more
than to let them range on the prairies at will.
By proper care great results can be accomplished.”
  
Hon. C. J. Jones, of Garden City, Kans., whose years
of experience with the buffalo, both as old-time hunter,
catcher, and breeder, has earned for him the sobriquet
of “Buffalo Jones,” five years ago became
deeply interested in the question of improving range
cattle by crossing with the buffalo. With characteristic
Western energy he has pursued the subject from that
time until the present, having made five trips to the
range of the only buffaloes remaining from the great
southern herd, and captured sixty-eight buffalo calves
and eleven adult cows with which to start a herd.
In a short article published in the Farmers’
Review (Chicago, August 22, 1888), Mr. Jones gives
his views on the value of the buffalo in cross-breeding
as follows:

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“In all my meanderings I have not found a place
but I could count more carcasses [of cattle] than
living animals. Who has not ridden over some
of the Western railways and counted dead cattle by
the thousands? The great question is, Where can
we get a race of cattle that will stand blizzards,
and endure the drifting snow, and will not be driven
with the storms against the railroad fences and pasture
fences, there to perish for the want of nerve to face
the northern winds for a few miles, to where the winter
grasses could be had in abundance? Realizing these
facts, both from observation and pocket, we pulled
on our ’thinking cap,’ and these points
came vividly to our mind:
  
“(1) We want an animal that is hardy.
  
“(2) We want an animal with nerve and endurance.
  
“(3) We want an animal that faces the blizzards
and endures the storms.
  
“(4) We want an animal that will rustle the
prairies, and not yield to discouragement.
  
“(5) We want an animal that will fill the above
bill, and make good beef and plenty of it.
  
[Illustration: HALF-BREED (BUFFALO-DOMESTIC)
COW.—­HERD OF C. J. JONES, GARDEN CITY,
KANSAS. Drawn by Ernest E. Thompson.]
  
“All the points above could easily be found
in the buffalo, excepting the fifth, and even that
is more than filled as to the quality, but not in
quantity. Where is the ‘old timer’
who has not had a cut from the hump or sirloin of
a fat buffalo cow in the fall of the year, and where
is the one who will not make affidavit that it was
the best meat he ever ate? Yes, the fat was very
rich, equal to the marrow from the bone of domestic
cattle. \* \* \*
  
“The great question remained unsolved as to
the quantity of meat from the buffalo. I finally
heard of a half-breed buffalo in Colorado, and immediately
set out to find it. I traveled at least 1,000
miles to find it, and found a five-year-old half-breed
cow that had been bred to domestic bulls and had brought
forth two calves—­a yearling and a sucking
calf that gave promise of great results.
  
“The cow had never been fed, but depended altogether
on the range, and when I saw her, in the fall of 1883.
I estimated her weight at 1,800 pounds. She was
a brindle, and had a handsome robe even in September;
she had as good hind quarters as ordinary cattle; her
foreparts were heavy and resembled the buffalo, yet
not near so much of the hump. The offspring showed
but very little of the buffalo, yet they possessed
a woolly coat, which showed clearly that they were
more than domestic cattle. \* \* \*
  
“What we can rely on by having one-fourth, one-half,
and three-fourths breeds might be analyzed as follows:

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“We can depend upon a race of cattle unequaled
in the world for hardiness and durability; a good
meat-bearing animal; the best and only fur-bearing
animal of the bovine race; the animal always found
in a storm where it is overtaken by it; a race of
cattle so clannish as never to separate and go astray;
the animal that can always have free range, as they
exist where no other animal can live; the animal that
can water every third day and keep fat, ranging from
20 to 30 miles from water; in fact, they are the perfect
animal for the plains of North America. One-fourth
breeds for Texas, one-half breeds for Colorado and
Kansas, and three-fourths breeds for more northern
country, is what will soon be sought after more than
any living animal. Then we will never be confronted
with dead carcarsses from starvation, exhaustion, and
lack of nerve, as in years gone by.”
 *The bison as a beast of burden.*—­On
account of the abundance of horses for all purposes
throughout the entire country, oxen are so seldom used
they almost constitute a curiosity. There never
has existed a necessity to break buffaloes to the
yoke and work them like domestic oxen, and so few
experiments have been made in this direction that reliable
data on this subject is almost wholly wanting.
While at Miles City, Mont., I heard of a German “granger”
who worked a small farm in the Tongue River Valley,
and who once had a pair of cow buffaloes trained to
the yoke. It was said that they were strong,
rapid walkers, and capable of performing as much work
as the best domestic oxen, but they were at times
so uncontrollably headstrong and obstinate as to greatly
detract from their usefulness. The particular
event of their career on which their historian dwelt
with special interest occurred when their owner was
hauling a load of potatoes to town with them.
In the course of the long drive the buffaloes grew
very thirsty, and upon coming within sight of the
water in the river they started for it in a straight
course. The shouts and blows of the driver only
served to hasten their speed, and presently, when
they reached the edge of the high bank, they plunged
down it without the slightest hesitation, wagon, potatoes,
and all, to the loss of everything except themselves
and the drink they went after!
  
Mr. Robert Wickliffe states that trained buffaloes
make satisfactory oxen. “I have broken
them to the yoke, and found them capable of making
excellent oxen; and for drawing wagons, carts, or other
heavily laden vehicles on long journeys they would,
I think, be greatly preferable to the common ox.”
  
It seems probable that, in the absence of horses,
the buffalo would make a much more speedy and enduring
draught animal than the domestic ox, although it is
to be doubted whether he would be as strong. His
weaker pelvis and hind quarters would surely count
against him under certain circumstances, but for some
purposes his superior speed and endurance would more
than counterbalance that defect.

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BISON HERDS AND INDIVIDUALS IN CAPTIVITY AND DOMESTICATION,
JANUARY 1, 1889.
 *Herd of Mr. S. L. Bedson, Stony Mountain, Manitoba.*—­In
1877 Mr. Bedson purchased 5 buffalo calves, 1 bull,
and 4 heifers, for which he paid $1,000. In 1888
his herd consisted of 23 full-blood bulls, 35 cows,
3 half-breed cows, 5 half-breed bulls, and 17 calves,
mixed and pure;[51] making a total of 83 head.
These were all produced from the original 5, no purchases
having been made, nor any additions made in any other
way. Besides the 83 head constituting the herd
when it was sold, 5 were killed and 9 given away,
which would otherwise make a total of 97 head produced
since 1877. In November, 1888, this entire herd
was purchased, for $50,000, by Mr. C. J. Jones, and
added to the already large herd owned by that gentleman
in Kansas.
  
[Note 51: In summing up the total number of buffaloes
and mixed-breeds now alive in captivity, I have been
obliged to strike an average on this lot of calves
“mixed and pure,” and have counted twelve
as being of pure breed and five mixed, which I have
reason to believe is very near the truth.]
  
[Illustration: YOUNG HALF-BREED (BUFFALO-DOMESTIC)
BULL.—­HERD OF C. J. JONES, GARDEN CITY,
KANSAS. Drawn by Ernest E. Thompson.]
 *Herd of Mr. C. J. Jones, Garden City, Kans.*—­Mr.
Jones’s original herd of 57 buffaloes constitute
a living testimonial to his individual enterprise,
and to his courage, endurance, and skill in the chase.
The majority of the individuals composing the herd
he himself ran down, lassoed, and tied with his own
hands. For the last five years Mr. Jones has
made an annual trip, in June, to the uninhabited “panhandle”
of Texas, to capture calves out of the small herd
of from one hundred to two hundred head which represented
the last remnant of the great southern herd.
Each of these expeditious involved a very considerable
outlay in money, an elaborate “outfit”
of men, horses, vehicles, camp equipage, and lastly,
but most important of all, a herd of a dozen fresh
milch cows to nourish the captured calves and keep
them from dying of starvation and thirst. The
region visited was fearfully barren, almost without
water, and to penetrate it was always attended by great
hardship. The buffaloes were difficult to find,
but the ground was good for running, being chiefly
level plains, and the superior speed of the running
horses always enabled the hunters to overtake a herd
whenever one was sighted, and to “cut out”
and lasso two, three, or four of its calves.
The degree of skill and daring displayed in these several
expeditions are worthy of the highest admiration, and
completely surpass anything I have ever seen or read
of being accomplished in connection with hunting,
or the capture of live game. The latest feat of
Mr. Jones and his party comes the nearest to being
incredible. During the month of May, 1888, they
not only captured seven calves, but also *eleven
adult cows*, of which some were lassoed in full

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career on the prairie, thrown, tied, and hobbled!
The majority, however, were actually “rounded
up,” herded, and held in control until a bunch
of tame buffaloes was driven down to meet them, so
that it would thus be possible to drive all together
to a ranch. This brilliant feat can only be appreciated
as it deserves by those who have lately hunted buffalo,
and learned by dear experience the extent of their
wariness, and the difficulties, to say nothing of
the dangers, inseparably connected with their pursuit.
  
The result of each of Mr. Jones’s five expeditions
is as follows: In 1884 no calves found; 1885,
11 calves captured, 5 died, 6 survived; 1886, 14 calves
captured, 7 died, 7 survived; 1887, 36 calves captured,
6 died, 30 survived; 1888, 7 calves captured, all survived;
1888, 11 old cows captured, all survived. Total,
79 captures, 18 losses, 57 survivors.
  
The census of the herd is exactly as follows:
Adult cows, 11; three-year olds, 7, of which 2 are
males and 5 females; two-year olds, 4, of which all
are males; yearling, 28, of which 15 are males and
13 females; calves, 7, of which 3 are males and 4
females. Total herd, 57; 24 males and 33 females.
To this, Mr. Jones’s original herd, must now
be added the entire herd formerly owned by Mr. Bedson.
  
Respecting his breeding operations Mr. Jones writes:
“My oldest [bull] buffaloes are now three years
old, and I am breeding one hundred domestic cows to
them this year. Am breeding the Galloway cows
quite extensively; also some Shorthorns, Herefords,
and Texas cows. I expect best results from the
Galloways. If I can get the black luster of the
latter and the fur of a buffalo, I will have a robe
that will bring more money than we get for the average
range steer.”
  
In November, 1888, Mr. Jones purchased Mr. Bedson’s
entire herd, and in the following mouth proceeded
to ship a portion of it to Kansas City. Thirty-three
head were separated from the remainder of the herd
on the prairie near Stony Mountain, 12 miles from
Winnipeg, and driven to the railroad. Several
old bulls broke away en route and ran back to the
herd, and when the remainder were finally corraled
in the pens at the stock-yards “they began to
fight among themselves, and some fierce encounters
were waged between the old bulls. The younger
cattle were raised on the horns of their seniors,
thrown in the air, and otherwise gored.”
While on the way to St. Paul three of the half-breed
buffaloes were killed by their companions. On
reaching Kansas City and unloading the two cars, 13
head broke away from the large force of men that attempted
to manage them, stampeded through the city, and finally
took refuge in the low-lands along the river.
In due time, however, all were recaptured.
  
Since the acquisition of this northern herd and the
subsequent press comment that it has evoked, Mr. Jones
has been almost overwhelmed with letters of inquiry
in regard to the whole subject of buffalo breeding,
and has found it necessary to print and distribute
a circular giving answers to the many inquiries that
have been made.

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*Herd of Mr. Charles Allard, Flathead Indian Reservation,
Montana.*—­This herd was visited in the
autumn of 1888 by Mr. G. O. Shields, of Chicago, who
reports that it consists of thirty-five head of pure-blood
buffaloes, of which seven are calves of 1888, six are
yearlings, and six are two-year olds. Of the adult
animals, four cows and two bulls are each fourteen
years old, “and the beards of the bulls almost
sweep the ground as they walk.”
 *Herd of Hon. W. F. Cody ("Buffalo Bill").*—­The
celebrated “Wild West Show” has, ever
since its organization, numbered amongst its leading
attractions a herd of live buffaloes of all ages.
At present this herd contains eighteen head, of which
fourteen were originally purchased of Mr. H. T. Groome,
of Wichita, Kansas, and have made a journey to London
and back. As a proof of the indomitable persistence
of the bison in breeding under most unfavorable circumstances,
the fact that four of the members of this herd are
calves which were born in 1888 in London, at the American
Exposition, is of considerable interest.
  
This herd is now (December, 1888) being wintered on
General Beale’s farm, near the city of Washington.
In 1886-’87, while the Wild West Show was at
Madison Square Garden, New York City, its entire herd
of twenty buffaloes was carried off by pleuro-pneumonia.
It is to be greatly feared that sooner or later in
the course of its travels the present herd will also
disappear, either through disease or accident.
 *Herd of Mr. Charles Goodnight, Clarendon, Texas.*—­Mr.
Goodnight writes that he has “been breeding
buffaloes in a small way for the past ten years,”
but without giving any particular attention to it.
At present his herd consists of thirteen head, of
which two are three-year old bulls and four are calves.
There are seven cows of all ages, one of which is
a half-breed.
 *Herd at the Zoological Society’s Gardens,
Philadelphia, Arthur E. Brown, superintendent.*—­This
institution is the fortunate possessor of a small
herd of ten buffaloes, of which four are males and
six females. Two are calves of 1877. In
1886 the Gardens sold an adult bull and cow to Hon.
W. F. Cody for $300.
 *Herd at Bismarck Grove, Kansas, owned by the Atchison,
Topeka and Santa Fé Railroad Company.*—­A
small herd of buffaloes has for several years past
been kept at Bismarck Grove as an attraction to visitors.
At present it contains ten head, one of which is a
very large bull, another in a four-year-old bull,
six are cows of various ages, and two are two-year
olds. In 1885 a large bull belonging to this herd
grew so vicious and dangerous that it was necessary
to kill him.
  
The following interesting account of this herd was
published in the Kansas City Times of December 8,
1888:

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“Thirteen years ago Colonel Stanton purchased
a buffalo bull calf for $8 and two heifers for $25.
The descendants of these three buffaloes now found
at Bismarck Grove, where all were born, number in all
ten. There were seventeen, but the rest have
died, with the exception of one, which was given away.
They are kept in an inclosure containing about 30 acres
immediately adjoining the park, and there may be seen
at any time. The sight is one well worth a trip
and the slight expense that may attach to it, especially
to one who has never seen the American bison in his
native state.
  
“The present herd includes two fine bull calves
dropped last spring, two heifers, five cows, and a
bull six years old and as handsome as a picture.
The latter has been named Cleveland, after the colonel’s
favorite Presidential candidate. The entire herd
is in as fine condition as any beef cattle, though
they were never fed anything but hay and are never
given any shelter. In fact they don’t take
kindly to shelter, and whether a blizzard is blowing,
with the mercury 20 degrees below zero, or the sun
pouring down his scorching rays, with the thermometer
110 degrees above, they set their heads resolutely
toward storm or sun and take their medicine as if
they liked it. Hon. W. F. Cody, “Buffalo
Bill,” tried to buy the whole herd two years
ago to take to Europe with his Wild West Show, but
they were not for sale at his own figures, and, indeed,
there is no anxiety to dispose of them at any figures.
The railroad company has been glad to furnish them
pasturage for the sake of adding to the attractions
of the park, in which there are also forty-three head
of deer, including two as fine bucks as ever trotted
over the national deer trail toward the salt-licks
in northern Utah.
  
“While the bison at Bismark Grove are splendid
specimens of their class, “Cleveland”
is decidedly the pride of the herd, and as grand a
creature as ever trod the soil of Kansas on four legs.
He is just six years old and is a perfect specimen
of the kings of the plains. There is royal blood
in his veins, and his coat is finer than the imperial
purple. It is not possible to get at him to measure
his stature and weight. He must weigh fully 3,000
pounds, and it is doubtful if there is to-day living
on the face of the earth a handsomer buffalo bull than
he. “Cleveland’s” disposition
is not so ugly as old Barney’s was, but at certain
seasons he is very wild, and there is no one venturesome
enough to go into the inclosure. It is then not
altogether safe to even look over the high and heavy
board fence at him, for he is likely to make a run
for the visitor, as the numerous holes in the fence
where he has knocked off the boards will testify.”
 *Herd of Mr. Frederick Dupree, Cheyenne Indian Agency,
near Fort Bennett, Dakota.*—­This herd
contains at present nine pure-blood buffaloes, five
of which are cows and seven mixed bloods. Of the
former, there are two adult bulls and four adult cows.
Of the mixed blood animals, six are half-breeds and
one a quarter-breed buffalo.

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Mr. Dupree obtained the nucleus of his herd in 1882,
at which time he captured five wild calves about 100
miles west of Fort Bennett. Of these, two died
after two months of captivity and a third was killed
by an Indian in 1885.
  
Mr. D. F. Carlin, of the Indian service, at Fort Bennett,
has kindly furnished me the following information
respecting this herd, under date of November 1, 1888:
  
“The animals composing this herd are all in
fine condition and are quite tame. They keep
by themselves most of the time, except the oldest bull
(six years old), who seems to appreciate the company
of domestic cattle more than that of his own family.
Mr. Dupree has kept one half-breed bull as an experiment;
he thinks it will produce a hardy class of cattle.
His half-breeds are all black, with one exception,
and that is a roan; but they are all built like the
buffalo, and when young they grunt more like a hog
than like a calf, the same as a full-blood buffalo.
  
“Mr. Dupree has never lost a [domestic] cow
in giving birth to a half-breed calf, as was supposed
by many people would be the case. There have
been no sales from this herd, although the owner has
a standing offer of $650 for a cow and bull.
The cows are not for sale at any price.”
 *Herd at Lincoln Park, Chicago, Mr. W. P. Walker,
superintendent.*—­This very interesting
and handsomely-kept herd is composed of seven individuals
of the following character: One bull eight years
old, one bull four years old, two cows eight years
old, two cows two years old in the spring of 1888,
and one female calf born in the spring of 1888.
 *Zoological Gardens, Cincinnati, Ohio.*—­This
collection contains four bison, an adult bull and
cow, and one immature specimen.
 *Dr. V. T. McGillicuddy, Rapid City, Dakota*,
has a herd of four pure buffaloes and one half-breed.
Of the former, the two adults, a bull and cow seven
years old, were caught by Sioux Indians near the Black
Hills for the owner in the spring of 1882. The
Indians drove two milch cows to the range to nourish
the calves when caught. These have produced two
calves, one of which, a bull, is now three years old,
and the other is a yearling heifer.
 *Central Park Menagerie, New York, Dr. W. A. Conklin,
director.*—­This much-visited collection
contains four bison, an adult bull and cow, a two-year-old
calf, and a yearling.
 *Mr. John H. Starin, Glen Inland, near New York
City.*—­There are four buffaloes at this
summer resort.
 *The U. S. National Museum, Washington, District
of Columbia.*—­The collection of the
department of living animals at this institution contains
two fine young buffaloes; a bull four years old in
July, 1888, and a cow three years old in May of the
same year. These animals were captured in western
Nebraska, when they were calves, by H. R. Jackett,
of Ogalalla, and kept by him on his ranch until 1885.
In April, 1888, Hon. Eugene G. Blackford, of New York,

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purchased them of Mr. Frederick D. Nowell, of North
Platte, Nebraska, for $100 for the pair, and presented
them to the National Museum, in the hope that they
might form the nucleus of a herd to be owned and exhibited
by the United States Government in or near the city
of Washington. The two animals were received
in Ogalalla by Mr. Joseph Palmer, of the National Museum,
and by him they were brought on to Washington in May,
in fine condition. Since their arrival they have
been exhibited to the public in a temporary inclosure
on the Smithsonian Grounds, and have attracted much
attention.
 *Mr. B. C. Winston, of Hamline, Minnesota*, owns
a pair of buffaloes, one of which, a young bull, was
caught by him in western Dakota in the spring of 1886,
soon after its birth. The cow was purchased at
Rosseau, Dakota Territory, a year later, for $225.
 *Mr. I. P. Butler, of Colorado, Texas*, is the
owner of a young bull buffalo and a half-breed calf.
 *Mr. Jesse Huston, of Miles City, Montana*, owns
a fine five-year-old bull buffalo.
 *Mr. L. F. Gardner, of Bellwood, Oregon*, is
the owner of a large adult bull.
 *The Riverside Ranch Company, south of Mandan, Dakota*,
owns a pair of full-blood buffaloes.
 *In Dakota*, in the hands of parties unknown,
there are four full-blood buffaloes.
 *Mr. James R. Hitch, of Optima, Indian Territory*,
has a pair of young buffaloes, which he has offered
for sale for $750.
 *Mr. Joseph A. Hudson, of Estell, Nebraska*,
owns a three-year-old bull buffalo, which is for sale.
  
In other countries there are live specimens of *Bison
americanus* reported as follows: two at Belleview
Gardens, Manchester, England; one at the Zoological
Gardens, London; one at Liverpool, England (purchased
of Hon. W. F. Cody in 1888); two at the Zoological
Gardens, Dresden; one at the Zoological Gardens, Calcutta.
+--------------------------------------------------+
| *Statistics of full-blood buffaloes | |
| in captivity January 1, 1889.* | |
+---------------------------------------------+----+
|Number kept for breeding purposes | 216|
|Number kept for exhibition | 40|
| | ---|
| Total pure-blood buffaloes in captivity | 256|
|Wild buffaloes under Government | |
|protection in the Yellowstone Park | 200|
|Number of mixed-breed buffalo-domestics | 40|
+--------------------------------------------------+
  
There are, without doubt, a few half-breeds in Manitoba
of which I have no account. It is probable there
are also a very few more captive buffaloes scattered
singly here and there which will be heard of later,
but the total will be a very small number, I am sure.

**PART II.—­THE EXTERMINATION.**

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**I. CAUSES OF THE EXTERMINATION.**  
The causes which led to the practical extinction (in
a wild state, at least) of the most economically valuable
wild animal that ever inhabited the American continent,
are by no means obscure. It is well that we should
know precisely what they were, and by the sad fate
of the buffalo be warned in time against allowing
similar causes to produce the same results with our
elk, antelope, deer, moose, caribou, mountain sheep,
mountain goat, walrus, and other animals. It will
be doubly deplorable if the remorseless slaughter
we have witnessed during the last twenty years carries
with it no lessons for the future. A continuation
of the record we have lately made as wholesale game
butchers will justify posterity in dating us back
with the mound-builders and cave-dwellers, when man’s
only known function was to slay and eat.
  
The primary cause of the buffalo’s extermination,
and the one which embraced all others, was the descent
of civilization, with all its elements of destructiveness,
upon the whole of the country inhabited by that animal.
From the Great Slave Lake to the Rio Grande the home
of the buffalo was everywhere overrun by the man with
a gun; and, as has ever been the case, the wild creatures
were gradually swept away, the largest and most conspicuous
forms being the first to go.
  
The secondary causes of the extermination of the buffalo
may be catalogued as follows:
  
(1) Man’s reckless greed, his wanton destructiveness,
and improvidence in not husbanding such resources
as come to him from the hand of nature ready made.
  
(2) The total and utterly inexcusable absence of protective
measures and agencies on the part of the National
Government and of the West States and Territories.
  
(3) The fatal preference on the part of hunters generally,
both white and red, for the robe and flesh of the
cow over that furnished by the bull.
  
(4) The phenomenal stupidity of the animals themselves,
and their indifference to man.
  
(5) The perfection of modern breech-loading rifles
and other sporting fire-arms in general.
  
Each of these causes acted against the buffalo with
its fall force, to offset which there was *not even
one* restraining or preserving influence, and it
is not to be wondered at that the species went down
before them. Had any one of these conditions been
eliminated the result would have been reached far
less quickly. Had the buffalo, for example, possessed
one-half the fighting qualities of the grizzly bear
he would have fared very differently, but his inoffensiveness
and lack of courage almost leads one to doubt the
wisdom of the economy of nature so far as it relates
to him.

**II.  METHODS OF SLAUGHTER.**

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1. *The still-hunt.*—­Of all the deadly
methods of buffalo slaughter, the still-hunt was the
deadliest. Of all the methods that were unsportsmanlike,
unfair, ignoble, and utterly reprehensible, this was
in every respect the lowest and the worst. Destitute
of nearly every element of the buoyant excitement
and spice of danger that accompanied genuine buffalo
hunting on horseback, the still-hunt was mere butchery
of the tamest and yet most cruel kind. About it
there was none of the true excitement of the chase;
but there was plenty of greedy eagerness to “down”
as many “head” as possible every day, just
as there is in every slaughter-house where the killers
are paid so much per head. Judging from all accounts,
it was about as exciting and dangerous work as it
would be to go out now and shoot cattle on the Texas
or Montana ranges. The probabilities are, however,
that shooting Texas cattle would be the most dangerous;
for, instead of running from a man on foot, as the
buffalo used to do, range cattle usually charge down
upon him, from motives of curiosity, perhaps, and
not infrequently place his life in considerable jeopardy.
  
The buffalo owes his extermination very largely to
his own unparalleled stupidity; for nothing else could
by any possibility have enabled the still-hunters
to accomplish what they did in such an incredibly short
time. So long as the chase on horseback was the
order of the day, it ordinarily required the united
efforts of from fifteen to twenty-five hunters to
kill a thousand buffalo in a single season; but a single
still-hunter, with a long-range breech-loader, who
knew how to make a “sneak” and get “a
stand on a bunch,” often succeeded in killing
from one to three thousand in one season by his own
unaided efforts. Capt. Jack Brydges, of
Kansas, who was one of the first to begin the final
slaughter of the southern herd, killed, by contract,
one thousand one hundred and forty-two buffaloes in
six weeks.
  
So long as the buffalo remained in large herds their
numbers gave each individual a feeling of dependence
upon his fellows and of general security from harm,
even in the presence of strange phenomena which he
could not understand. When he heard a loud report
and saw a little cloud of white smoke rising from
a gully, a clump of sage-brash, or the top of a ridge,
200 yards away, he wondered what it meant, and held
himself in readiness to follow his leader in case
she should run away. But when the leader of the
herd, usually the oldest cow, fell bleeding upon the
ground, and no other buffalo promptly assumed the leadership
of the herd, instead of acting independently and fleeing
from the alarm, he merely did as he saw the others
do, and waited his turn to be shot. Latterly,
however, when the herds were totally broken up, when
the few survivors were scattered in every direction,
and it became a case of every buffalo for himself,
they became wild and wary, ever ready to start off
at the slightest alarm, and run indefinitely.
Had they shown the same wariness seventeen years ago
that the survivors have manifested during the last
three or four years, there would now be a hundred
thousand head alive instead of only about three hundred
in a wild and unprotected state.

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Notwithstanding the merciless war that had been waged
against the buffalo for over a century by both whites
and Indians, and the steady decrease of its numbers,
as well as its range, there were several million head
on foot, not only up to the completion of the Union
Pacific Railway, but as late as the year 1870.
Up to that time the killing done by white men had
been chiefly for the sake of meat, the demand for robes
was moderate, and the Indians took annually less than
one hundred thousand for trading. Although half
a million buffaloes were killed by Indians, half-breeds,
and whites, the natural increase was so very considerable
as to make it seem that the evil day of extermination
was yet far distant.
  
But by a coincidence which was fatal to the buffalo,
with the building of three lines of railway through
the most populous buffalo country there came a demand
for robes and hides, backed up by an unlimited supply
of new and marvellously accurate breech-loading rifles
and fixed ammunition. And then followed a wild
rush of hunters to the buffalo country, eager to destroy
as many head as possible in the shortest time.
For those greedy ones the chase on horseback was “too
slow” and too unfruitful. That was a retail
method of killing, whereas they wanted to kill by
wholesale. From their point of view, the still-hunt
or “sneak” hunt was the method *par
excellence*. If they could have obtained Gatling
guns with which to mow down a whole herd at a time,
beyond a doubt they would have gladly used them.
  
The still-hunt was seen at its very worst in the years
1871, 1872, and 1873, on the southern buffalo range,
and ten years later at its best in Montana, on the
northern. Let us first consider it at its best,
which in principle was bad enough.
  
The great rise in the price of robes which followed
the blotting out of the great southern herd at once
put buffalo-hunting on a much more comfortable and
respectable business basis in the North than it had
ever occupied in the South, where prices had all along
been phenomenally low.
  
In Montana it was no uncommon thing for a hunter to
invest from $1,000 to $2,000 in his “outfit”
of horses, wagons, weapons, ammunition, provisions,
and sundries.
  
One of the men who accompanied the Smithsonian Expedition
for Buffalo, Mr. James McNaney, of Miles City, Montana,
was an ex-buffalo banter, who had spent three seasons
on the northern range, killing buffalo for their robes,
and his standing as a hunter was of the best.
A brief description of his outfit and its work during
its last season on the range (1882-’83) may
fairly be taken as a typical illustration of the life
and work of the still-hunter at its best. The
only thing against it was the extermination of the
buffalo.

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During the winters of 1880 and 1881 Mr. McNaney had
served in Maxwell’s outfit as a hunter, working
by the month, but his success in killing was such
that he decided to work the third year on his own account.
Although at that time only seventeen years of age,
he took an elder brother as a partner, and purchased
an outfit in Miles City, of which the following were
the principal items: Two wagons, 2 four-horse
teams, 2 saddle-horses, 2 wall-tents, 1 cook-stove
with pipe, 1 40-90 Sharp’s rifle (breech-loading),
1 45-70 Sharps rifle (breech-loading), 1 45-120 Sharps
rifle (breech-loading), 50 pounds gunpowder, 550 pounds
lead, 4,500 primers, 600 brass shells, 4 sheets patch-paper,
60 Wilson skinning knives, 3 butcher’s steels,
1 portable grindstone, flour, bacon, baking-powder,
coffee, sugar, molasses, dried apples, canned vegetables,
beans, *etc*., in quantity.
  
The entire cost of the outfit was about $1,400.
Two men were hired for the season at $50 per month,
and the party started from Miles City on November
10, which was considered a very late start. The
usual time of setting out for the range was about
October 1.
  
The outfit went by rail northeastward to Terry, and
from thence across country south and east about 100
miles, around the head of O’Fallon Creek to
the head of Beaver Creek, a tributary of the Little
Missouri. A good range was selected, without
encroachment upon the domains of the hunters already
in the field, and the camp was made near the bank of
the creek, close to a supply of wood and water, and
screened from distant observation by a circle of hills
and ridges. The two rectangular wall-tents were
set up end to end, with the cook-stove in the middle,
where the ends came together. In one tent the
cooking and eating was done, and the other contained
the beds.
  
It was planned that the various members of the party
should cook turn about, a week at a time, but one
of them soon developed such a rare and conspicuous
talent for bread-making and general cookery that he
was elected by acclamation to cook during the entire
season. To the other three members fell the hunting.
Each man hunted separately from the others, and skinned
all the animals that his rifle brought down.
  
There were buffalo on the range when the hunters arrived,
and the killing began at once. At daylight the
still-hunter sallied forth on foot, carrying in his
hand his huge Sharps rifle, weighing from 16 to 19
pounds, with from seventy-five to one hundred loaded
cartridges in his two belts or his pockets. At
his side, depending from his belt, hung his “hunter’s
companion,” a flat leather scabbard, containing
a ripping knife, a skinning knife, and a butcher’s
steel upon which to sharpen them. The total weight
carried was very considerable, seldom less than 36
pounds, and often more.
  
Inasmuch as it was highly important to move camp as
seldom as possible in the course of a season’s
work, the hunter exercised the greatest precaution
in killing his game, and had ever before his mind the
necessity of doing his killing without frightening
away the survivors.

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With ten thousand buffaloes on their range, it was
considered the height of good luck to find a “bunch”
of fifty head in a secluded “draw” or
hollow, where it was possible to “make a kill”
without disturbing the big herd.
  
The still-hunter usually went on foot, for when buffaloes
became so scarce as to make it necessary for him to
ride his occupation was practically gone. At
the time I speak of, the hunter seldom had to walk
more than 3 miles from camp to find buffalo, in case
there were any at all on his range, and it was usually
an advantage to be without a horse. From the
top of a ridge or high butte the country was carefully
scanned, and if several small herds were in sight
the one easiest to approach was selected as the one
to attack. It was far better to find a herd lying
down or quietly grazing, or sheltering from a cold
wind, than to find it traveling, for while a hard
run of a mile or two often enabled the hunter to “head
off” a moving herd and kill a certain number
of animals out of it, the net results were never half
so satisfactory as with herds absolutely at rest.
  
Having decided upon an attack, the hunter gets to
leeward of his game, and approaches it according to
the nature of the ground. If it is in a hollow,
he secures a position at the top of the nearest ridge,
as close as he can get. If it is in a level “flat,”
he looks for a gully up which he can skulk until within
good rifle-shot. If there is no gully, he may
be obliged to crawl half a mile on his hands and knees,
often through snow or amongst beds of prickly pear,
taking advantage of even such scanty cover as sage-brush
affords. Some Montana still-hunters adopted the
method of drawing a gunny-sack over the entire upper
half of the body, with holes cut for the eyes and
arms, which simple but unpicturesque arrangement often
enabled the hunter to approach his game much more
easily and more closely than would otherwise have been
possible.
  
[Illustration: STILL-HUNTING BUFFALOES ON THE
NORTHERN RANGE. From a painting by J. H. Moser,
in the National Museum.]
  
Having secured a position within from 100 to 250 yards
of his game (often the distance was much greater),
the hunter secures a comfortable rest for his huge
rifle, all the time keeping his own person thoroughly
hidden from view, estimates the distance, carefully
adjusts his sights, and begins business. If the
herd is moving, the animal in the lead is the first
one shot, close behind the fore leg and about a foot
above the brisket, which sends the ball through the
lungs. If the herd is at rest, the oldest cow
is always supposed to be the leader, and she is the
one to kill first. The noise startles the buffaloes,
they stare at the little cloud of white smoke and
feel inclined to run, but seeing their leader hesitate
they wait for her. She, when struck, gives a violent
start forward, but soon stops, and the blood begins
to run from her nostrils in two bright crimson streams.

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In a couple of minutes her body sways unsteadily,
she staggers, tries hard to keep her feet, but soon
gives a lurch sidewise and falls. Some of the
other members of the herd come around her and stare
and sniff in wide-eyed wonder, and one of the more
wary starts to lead the herd away. But before
she takes half a dozen steps “bang!” goes
the hidden rifle again, and her leadership is ended
forever. Her fall only increases the bewilderment
of the survivors over a proceeding which to them is
strange and unaccountable, because the danger is not
visible. They cluster around the fallen ones,
sniff at the warm blood, bawl aloud in wonderment,
and do everything but run away.
  
The policy of the hunter is to not fire too rapidly,
but to attend closely to business, and every time
a buffalo attempts to make off, shoot it down.
One shot per minute was a moderate rate of firing,
but under pressure of circumstances two per minute
could be discharged with deliberate precision.
With the most accurate hunting rifle ever made, a
“dead rest,” and a large mark practically
motionless, it was no wonder that nearly every shot
meant a dead buffalo. The vital spot on a buffalo
which stands with its side to the hunter is about a
foot in diameter, and on a full-grown bull is considerably
more. Under such conditions as the above, which
was called getting “a stand,” the hunter
nurses his victims just as an angler plays a big fish
with light tackle, and in the most methodical manner
murders them one by one, either until the last one
falls, his cartridges are all expended, or the stupid
brutes come to their senses and run away. Occasionally
the poor fellow was troubled by having his rifle get
too hot to use, but if a snow-bank was at hand he
would thrust the weapon into it without ceremony to
cool it off.
  
A success in getting a stand meant the slaughter of
a good-sized herd. A hunter whom I met in Montana,
Mr. Harry Andrews, told me that he once fired one
hundred and fifteen shots from one spot and killed
sixty-three buffalo in less than an hour. The
highest number Mr. McNaney ever knew of being killed
in one stand was ninety-one head, but Colonel Dodge
once counted one hundred and twelve carcasses of buffalo
“inside of a semicircle of 200 yards radius,
all of which were killed by one man from the same
spot, and in less than three-quarters of an hour.”
  
The “kill” being completed, the hunter
then addressed himself to the task of skinning his
victims. The northern hunters were seldom guilty
of the reckless carelessness and lack of enterprise
in the treatment of robes which at one time was so
prominent a feature of work on the southern range.
By the time white men began to hunt for robes on the
northern range, buffalo were becoming comparatively
scarce, and robes were worth from $2 to $4 each.
The fur-buyers had taught the hunters, with the potent
argument of hard cash, that a robe carefully and neatly
taken off, stretched, and kept reasonably free from

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blood and dirt, was worth more money in the market
than one taken off in a slovenly manner, and contrary
to the nicer demands of the trade. After 1880,
buffalo on the northern range were skinned with considerable
care, and amongst the robe-hunters not one was allowed
to become a loss when it was possible to prevent it.
Every full-sized cow robe was considered equal to $3.50
in hard cash, and treated accordingly. The hunter,
or skinner, always stretched every robe out on the
ground to its fullest extent while it was yet warm,
and cut the initials of his employer in the thin subcutaneous
muscle which always adhered to the inside of the skin.
A warm skin is very elastic, and when stretched upon
the ground the hair holds it in shape until it either
dries or freezes, and so retains its full size.
On the northern range skins were so valuable that many
a dispute arose between rival outfits over the ownership
of a dead buffalo, some of which produced serious
results.
  
2. *The chase on horseback or “running buffalo."*—­Next
to the still-hunt the method called “running
buffalo” was the most fatal to the race, and
the one most universally practiced. To all hunters,
save greedy white men, the chase on horseback yielded
spoil sufficient for every need, and it also furnished
sport of a superior kind—­manly, exhilarating,
and well spiced with danger. Even the horses shared
the excitement and eagerness of their riders.
  
So long as the weapons of the Indian consisted only
of the bow and arrow and the spear, he was obliged
to kill at close quarters or not at all. And
even when fire-arms were first placed in his hands
their caliber was so small, the charge so light, and
the Indian himself so poor a marksman at long range,
that his best course was still to gallop alongside
the herd on his favorite “buffalo horse”
and kill at the shortest possible range. From
all accounts, the Red River half-breeds, who hunted
almost exclusively with fire-arms, never dreamed of
the deadly still hunt, but always killed their game
by “running” it.
  
In former times even the white men of the plains did
the most of their buffalo hunting on horseback, using
the largest-sized Colt’s revolver, sometimes
one in each hand, until the repeating-rifle made its
appearance, which in a great measure displaced the
revolver in running buffalo. But about that time
began the mad warfare for “robes” and
“hides,” and the only fair and sportsmanlike
method of hunting was declared too slow for the greedy
buffalo-skinners.
  
Then came the cold-blooded butchery of the still-hunt.
From that time on the buffalo as a game animal steadily
lost caste. It soon came to be universally considered
that there was no sport in hunting buffalo. True
enough of still-hunting, where the hunter sneaks up
and shoots them down one by one at such long range
the report of his big rifle does not even frighten
them away. So far as sportsmanlike fairness is
concerned, that method was not one whit more elevated
than killing game by poison.

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Bat the chase on horseback was a different thing.
Its successful prosecution demanded a good horse,
a bold rider, a firm seat, and perfect familiarity
with weapons. The excitement of it was intense,
the dangers not to be despised, and, above all, the
buffalo had a fair show for his life, or partially
so, at least. The mode of attack is easily described.
  
Whenever the hunters discovered a herd of buffalo,
they usually got to leeward of it and quietly rode
forward in a body, or stretched out in a regular skirmish
line, behind the shelter of a knoll, perhaps, until
they had approached the herd as closely as could be
done without alarming it. Usually the unsuspecting
animals, with a confidence due more to their great
numbers than anything else, would allow a party of
horsemen to approach within from 200 to 400 yards of
their flankers, and then they would start off on a
slow trot. The hunters then put spurs to their
horses and dashed forward to overtake the herd as quickly
as possible. Once up with it, each hunter chooses
the best animal within his reach, chases him until
his flying steed carries him close alongside, and
then the arrow or the bullet is sent into his vitals.
The fatal spot is from 12 to 18 inches in circumference,
and lies immediately back of the fore leg, with its
lowest point on a line with the elbow.
  
This, the true chase of the buffalo, was not only
exciting, but dangerous. It often happened that
the hunter found himself surrounded by the flying
herd, and in a cloud of dust, so that neither man nor
horse could see the ground before them. Under
such circumstances fatal accidents to both men and
horses were numerous. It was not an uncommon
thing for half-breeds to shoot each other in the excitement
of the chase; and, while now and then a wounded bull
suddenly turned upon his pursuer and overthrew him,
the greatest number of casualties were from falls.
  
Of the dangers involved in running buffalo Colonel
Dodge writes as follows:[52]
  
[Note 52: Plains of the Great West, p. 127.]
  
“The danger is not so much from the buffalo,
which rarely makes an effort to injure his pursuer,
as from the fact that neither man nor horse can see
the ground, which may be rough and broken, or perforated
with prairie-dog or gopher holes. This danger
is so imminent, that a man who runs into a herd of
buffalo may be said to take his life in his hand.
I have never known a man hurt by a buffalo in such
a chase. I have known of at least six killed,
and a very great many more or less injured, some very
severely, by their horses falling with them.”
  
On this point Catlin declares that to engage in running
buffalo is “at the hazard of every bone in one’s
body, to feel the fine and thrilling exhilaration
of the chase for a moment, and then as often to upbraid
and blame himself for his folly and imprudence.”

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Previous to my first experience in “running
buffalo” I had entertained a mortal dread of
ever being called upon to ride a chase across a prairie-dog
town. The mouth of a prairie-dog’s burrow
is amply large to receive the hoof of a horse, and
the angle at which the hole descends into the earth
makes it just right for the leg of a running horse
to plunge into up to the knee and bring down both
horse and rider instantly; the former with a broken
leg, to say the least of it. If the rider sits
loosely, and promptly resigns his seat, he will go
flying forward, as if thrown from a catapult, for
20 feet or so, perhaps to escape with a few broken
bones, and perhaps to have his neck broken, or his
skull fractured on the hard earth. If he sticks
tightly to his saddle, his horse is almost certain
to fall upon him, and perhaps kill him. Judge,
then, my feelings when the first bunch of buffalo we
started headed straight across the largest prairie-dog
town I had ever seen up to that time. And not
only was the ground honey-combed with gaping round
holes, but it was also crossed here and there by treacherous
ditch-like gullies, cut straight down into the earth
to an uncertain depth, and so narrow as to be invisible
until it was almost time to leap across them.
  
But at such a time, with the game thundering along
a few rods in advance, the hunter thinks of little
else except getting up to it. He looks as far
ahead as possible, and helps his horse to avoid dangers,
but to a great extent the horse must guide himself.
The rider plies his spurs and looks eagerly forward,
almost feverish with excitement and eagerness, but
at the same time if he is wise he *expects* a
fall, and holds himself in readiness to take the ground
with as little damage as he can.
  
Mr. Catlin gives a most graphic description of a hunting
accident, which may fairly be quoted in full as a
type of many such. I must say that I fully sympathize
with M. Chardon in his estimate of the hardness of
the ground he fell upon, for I have a painful recollection
of a fall I had from which I arose with the settled
conviction that the ground in Montana is the hardest
in the world! It seemed more like falling upon
cast-iron than prairie turf.
  
“I dashed along through the thundering mass
as they swept away over the plain, scarcely able to
tell whether I was on a buffalo’s back or my
horse, hit and hooked and jostled about, till at length
I found myself alongside my game, when I gave him
a shot as I passed him.
  
[Illustration: THE CHASE ON HORSEBACK. From
a painting in the National Museum by George Catlin.]

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I saw guns flash about me in several directions, but
I heard them not. Amidst the trampling throng
*Mons*. Chardon had wounded a stately bull, and
at this moment was passing him with his piece leveled
for another shot. They were both at full speed
and I also, within the reach of the muzzle of my gun,
when the bull instantly turned, receiving the horse
upon his horns, and the ground received poor Chardon,
who made a frog’s leap of some 20 feet or more
over the bull’s back and almost under my horse’s
heels. I wheeled my horse as soon as possible
and rode back where lay poor Chardon, gasping to start
his breath again, and within a few paces of him his
huge victim, with his heels high in the air, and the
horse lying across him. I dismounted instantly,
but Chardon was raising himself on his hands, with
his eyes and mouth full of dirt, and feeling for his
gun, which lay about 30 feet in advance of him.
’Heaven spare you! are you hurt, Chardon?’
’Hi-hic—­hic—­hic—­hic—­no;—­hic—­no—­no,
I believe not. Oh, this is not much, *Mons*.
Cataline—­this is nothing new—­but
this is a d—­d hard piece of ground here—­hic—­oh!
hic!’ At this the poor fellow fainted, but in
a few moments arose, picked up his gun, took his horse
by the bit, which then opened *its* eyes, and
with a *hic* and a ugh—­*ughk!*—­sprang
upon its feet, shook off the dirt, and here we were,
all upon our legs again, save the bull, whose fate
had been more sad than that of either."[53]
  
[Note 53: North American Indians, I, pp. 25-26.]
  
The following passage from Mr. Alexander Ross’s
graphic description of a great hunt,[54] in which
about four hundred hunters made an onslaught upon
a herd, affords a good illustration of the dangers
in running buffalo:
  
[Note 54: Red River Settlement, p. 256.]
  
“On this occasion the surface was rocky and
full of badger-holes. Twenty-three horses and
riders were at one moment all sprawling on the ground;
one horse, gored by a bull, was killed on the spot;
two more were disabled by the fall; one rider broke
his shoulder-blade; another burst his gun and lost
three of his fingers by the accident; and a third
was struck on the knee by an exhausted ball. These
accidents will not be thought overnumerous, considering
the result, for in the evening no less than thirteen
hundred and seventy-five tongues were brought into
camp.”
  
It really seems as if the horses of the plains entered
willfully and knowingly into the war on the doomed
herds. But for the willingness and even genuine
eagerness with which the “buffalo horses”
of both white men and Indians entered into the chase,
hunting on horseback would have been attended with
almost insurmountable difficulties, and the results
would have been much less fatal to the species.
According to all accounts the horses of the Indians
and half-breeds were far better trained than those
of their white rivals, no doubt owing to the fact that
the use of the bow, which required the free use of

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both hands, was only possible when the horse took
the right coarse of his own free will or else could
be guided by the pressure of the knees. If we
may believe the historians of that period, and there
is not the slightest reason to doubt them, the “buffalo
horses” of the Indians displayed almost as much
intelligence and eagerness in the chase as did their
human riders. Indeed, in “running buffalo”
with only the bow and arrow, nothing but the willing
co-operation of the horse could have possibly made
this mode of hunting either satisfactory or successful.
  
In Lewis and Clarke’s Travels, volume II, page
387, appears the following record:
  
“He [Sergeant Pryor] had found it almost impossible
with two men to drive on the remaining horses, for
as soon as they discovered a herd of buffaloes the
loose horses immediately set off in pursuit of them,
and surrounded the buffalo herd with almost as much
skill as their riders could have done. At last
he was obliged to send one horseman forward and drive
all the buffaloes from the route.”
  
The Hon. H. H. Sibley, who once accompanied the Red
River half-breeds on their annual hunt, relates the
following[55]:
  
“One of the hunters fell from his saddle, and
was unable to overtake his horse, which continued
the chase as if he of himself could accomplish great
things, so much do these animals become imbued with
a passion for this sport! On another occasion
a half-breed left his favorite steed at the camp,
to enable him to recruit his strength, enjoining upon
his wife the necessity of properly securing the animal,
which was not done. Not relishing the idea of
being left behind, he started after us and soon was
alongside, and thus he continued to keep pace with
the hunters in their pursuit of the buffalo, seeming
to await with impatience the fall of some of them
to the earth. The chase ended, he came neighing
to his master, whom he soon singled out, although
the men were dispersed here and there for a distance
of miles.”
  
[Note 55: Schoolcraft’s “North American
Indians,” 108.]
  
Col. R. I. Dodge, in his Plains of the Great
West, page 129, describes a meeting with two Mexican
buffalo-hunters whose horses were so fleet and so
well trained that whenever a herd of buffalo came in
sight, instead of shooting their game wherever they
came up with it, the one having the best horse would
dash into the herd, cut out a fat two-year old, and,
with the help of his partner, then actually drive it
to their camp before shooting it down. “They
had a fine lot of meat and a goodly pile of skins,
and they said that every buffalo had been driven into
camp and killed as the one I saw. ’It saves
a heap of trouble packing the meat to camp,’
said one of them, naively.”

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Probably never before in the history of the world,
until civilized man came in contact with the buffalo,
did whole armies of men march out in true military
style, with officers, flags, chaplains, and rules of
war, and make war on wild animals. No wonder
the buffalo has been exterminated. So long as
they existed north of the Missouri in any considerable
number, the half-breeds and Indians of the Manitoba
Red River settlement used to gather each year in a
great army, and go with carts to the buffalo range.
On these great hunts, which took place every year
from about the 15th of June to the 1st of September,
vast numbers of buffalo were killed, and the supply
was finally exhausted. As if Heaven had decreed
the extirpation of the species, the half-breed hunters,
like their white robe-hunting rivals farther south,
always killed *cows* in preference to bulls so
long as a choice was possible, the very course best
calculated to exterminate any species in the shortest
possible time.
  
The army of half-breeds and Indians which annually
went forth from the Red River settlement to make war
on the buffalo was often far larger than the army
with which Cortez subdued a great empire. As early
as 1846 it had become so great, that it was necessary
to divide it into two divisions, one of which, the
White Horse Plain division, was accustomed to go west
by the Assinniboine River to the “rapids crossing-place,”
and from there in a southwesterly direction.
The Red River division went south to Pembina, and
did the most of their hunting in Dakota. The two
divisions sometimes met (says Professor Hind), but
not intentionally. In 1849 a Mr. Flett took a
census of the White Horse Plain division, in Dakota
Territory, and found that it contained 603 carts, 700
half-breeds, 200 Indians, 600 horses, 200 oxen, 400
dogs, and 1 cat.
  
In his “Red River Settlement” Mr. Alexander
Ross gives the following census of the number of carts
assembled in camp for the buffalo hunt at five different-periods:
+--------------------------+
|\_Number of carts assembled|
| for the first trip.\_ |
+--------------------------+
|In 1820 | 540|
|In 1825 | 680|
|In 1830 | 820|
|In 1835 | 970|
|In 1840 | 1,210|
+--------------------------+
  
The expedition which was accompanied by Rev. Mr. Belcourt,
a Catholic priest, whose account is set forth in the
Hon. Mr. Sibley’s paper on the buffalo,[56]
was a comparatively small one, which started from Pembina,
and very generously took pains not to spoil the prospects
of the great Red River division, which was expected
to take the field at the same time. This, therefore,
was a small party, like others which had already reached
the range; but it contained 213 carts, 55 hunters and
their families, making 60 lodges in all. This
party killed 1,776 cows (bulls not counted, many of
which were killed, though “not even a tongue
was taken"), which yielded 228 bags of pemmican, 1,213

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bales of dried meat, 166 sacks of tallow, and 556
bladders full of marrow. But this was very moderate
slaughter, being about 33 buffalo to each family.
Even as late as 1872, when buffalo were getting scarce,
Mr. Grant[57] met a half-breed family on the Qu’Appelle,
consisting of man, wife, and seven children, whose
six carts were laden with the meat and robes yielded
by *sixty* buffaloes; that number representing
this one hunter’s share of the spoils of the
hunt.
  
[Note 56: Schoolcraft, pp. 101-110.]
  
[Note 57: Ocean to Ocean, p. 116.]
  
To afford an idea of the truly military character
of those Red River expeditions, I have only to quote
a page from Prof. Henry Youle Hind:[58]
  
[Note 58: Assinniboine and Saskatch. Exp.
Exped., II, p. 111.]
  
“After the start from the settlement has been
well made, and all stragglers or tardy hunters have
arrived, a great council is held and a president elected.
A number of captains are nominated by the president
and people jointly. The captains then proceed
to appoint their own policemen, the number assigned
to each not exceeding ten. Their duties are to
see that the laws of the hunt are strictly carried
out. In 1840, if a man ran a buffalo without
permission before the general hunt began, his saddle
and bridle were cut to pieces for the first offense;
for the second offense his clothes were cut off his
back. At the present day these punishments are
changed to a fine of 20 shillings for the first offense.
No gun is permitted to be fired when in the buffalo
country before the ‘race’ begins.
A priest sometimes goes with the hunt, and mass is
then celebrated in the open prairies.
  
“At night the carts are placed in the form of
a circle, with the horses and cattle inside the ring,
and it is the duty of the captains and their policemen
to see that this is rightly done. All laws are
proclaimed in camp, and relate to the hunt alone.
All camping orders are given by signal, a flag being
carried by the guides, who are appointed by election.
Each guide has his tarn of one day, and no man can
pass a guide on duty without subjecting himself to
a fine of 5 shillings. No hunter can leave the
camp to return home without permission, and no one
is permitted to stir until any animal or property of
value supposed to be lost is recovered. The policemen,
at the order of their captains, can seize any cart
at night-fall and place it where they choose for the
public safety, but on the following morning they are
compelled to bring it back to the spot from which
they moved it the previous evening. This power
is very necessary, in order that the horses may not
be stampeded by night attacks of the Sioux or other
Indian tribes at war with the half-breeds. A
heavy fine is imposed in case of neglect in extinguishing
fires when the camp is broken up in the morning.
  
“In sight of buffalo all the hunters are drawn
up in line, the president, captains, and police being
a few yards in advance, restraining the impatient
hunters. ‘Not yet! Not yet!’
is the subdued whisper of the president. The
approach to the herd is cautiously made. ‘Now!’
the president exclaims; and as the word leaves his
lips the charge is made, and in a few minutes the
excited half-breeds are amongst the bewildered buffalo.”

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“After witnessing one buffalo hunt,” says
Prof. John Macoun, “I can not blame the
half-breed and the Indian for leaving the farm and
wildly making for the plains when it is reported that
buffalo have crossed the border.”
  
The “great fall hunt” was a regular event
with about all the Indian tribes living within striking
distance of the buffalo, in the course of which great
numbers of buffalo were killed, great quantities of
meat dried and made into pemmican, and all the skins
taken were tanned in various ways to suit the many
purposes they were called upon to serve.
  
Mr. Francis La Flesche informs me that during the
presence of the buffalo in western Nebraska and until
they were driven south by the Sioux, the fall hunt
of the Omahas was sometimes participated in by three
hundred lodges, or about 3,000 people all told, six
hundred of whom were warriors, and each of whom generally
killed about ten buffaloes. The laws of the hunt
were very strict and inexorable. In order that
all participants should have an equal chance, it was
decreed that any hunter caught “still-hunting”
should be soundly flogged. On one occasion an
Indian was discovered in the act, but not caught.
During the chase which was made to capture him many
arrows were fired at him by the police, but being
better mounted than his pursuers he escaped, and kept
clear of the camp during the remainder of the hunt.
On another occasion an Omaha, guilty of the same offense,
was chased, and in his effort to escape his horse
fell with him in a coulée and broke one of his legs.
In spite of the sad plight of the Omaha, his pursuers
came up and flogged him, just as if nothing had happened.
  
After the invention of the Colt’s revolver,
and breech-loading rifles generally, the chase on
horseback speedily became more fatal to the bison
than it ever had been before. With such weapons,
it was possible to gallop into the midst of a flying
herd and, during the course of a run of 2 or 3 miles,
discharge from twelve to forty shots at a range of
only a few yards, or even a few feet. In this
kind of hunting the heavy Navy revolver was the favorite
weapon, because it could be held in one hand and fired
with far greater precision than could a rifle held
in both hands. Except in the hands of an expert,
the use of the rifle was limited, and often attended
with risk to the hunter; but the revolver was good
for all directions; it could very often be used with
deadly effect where a rifle could not have been used
at all, and, moreover, it left the bridle-hand free.
Many cavalrymen and hunters were able to use a revolver
with either hand, or one in each hand. Gen. Lew.
Wallace preferred the Smith and Wesson in 1867, which
he declared to be “the best of revolvers”
then.

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It was his marvelous skill in shooting buffaloes with
a rifle, from the back of a galloping horse, that
earned for the Hon. W. F. Cody the sobriquet by which
he is now familiarly known to the world—­“Buffalo
Bill.” To the average hunter on horseback
the galloping of the horse makes it easy for him to
aim at the heart of a buffalo and shoot clear over
its back. No other shooting is so difficult, or
requires such consummate dexterity as shooting with
any kind of a gun, especially a rifle, from the back
of a running horse. Let him who doubts this statement
try it for himself and he will doubt no more.
It was in the chase of the buffalo on horseback, armed
with a rifle, that “Buffalo Bill” acquired
the marvelous dexterity with the rifle which he has
since exhibited in the presence of the people of two
continents. I regret that circumstances have
prevented my obtaining the exact figures of the great
kill of buffaloes that Mr. Cody once made in a single
run, in which he broke all previous records in that
line, and fairly earned his title. In 1867 he
entered into a contract with the Kansas Pacific Railway,
then in course of construction through western Kansas,
at a monthly salary of $500, to deliver all the buffalo
meat that would be required by the army of laborers
engaged in building the road. In eighteen mouths
he killed 4,280 buffaloes.
  
3. *Impounding or Killing in Pens.*—­At
first thought it seems hard to believe that it was
ever possible for Indians to build pens and drive
wild buffaloes into them, as cowboys now corral their
cattle, yet such wholesale catches were of common
occurrence among the Plains Crees of the south Saskatchewan
country, and the same general plan was pursued, with
slight modifications, by the Indians of the Assinniboine,
Blackfeet, and Gros Ventres, and other tribes of the
Northwest. Like the keddah elephant-catching
operations in India, this plan was feasible only in
a partially wooded country, and where buffalo were
so numerous that their presence could be counted upon
to a certainty. The “pound” was simply
a circular pen, having a single entrance; but being
unable to construct a gate of heavy timbers, such
as is made to drop and close the entrance to an elephant
pen, the Indians very shrewdly got over the difficulty
by making the opening at the edge of a perpendicular
bank 10 or 12 feet high, easy enough for a buffalo
to jump down, but impossible for him to scale afterward.
It is hardly probable that Indians who were expert
enough to attack and kill buffalo on foot would have
been tempted to undertake the labor that building
a pound always involved, had it not been for the wild
excitement attending captures made in this way, and
which were shared to the fullest possible extent by
warriors, women, and children alike.

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The best description of this method which has come
under our notice is that of Professor Hind, who witnessed
its practice by the Plains Crees, on the headwaters
of the Qu’Appelle River, in 1858. He describes
the pound he saw as a fence, constructed of the trunks
of trees laced together with green withes, and braced
on the outside by props, inclosing a circular space
about 120 feet in diameter. It was placed in
a pretty dell between sand-hills, and leading from
it in two diverging rows (like the guiding wings of
an elephant pen) were the two rows of bushes which
the Indians designate “dead men,” which
serve to guide the buffalo into the pound. The
“dead men” extended a distance of 4 miles
into the prairie. They were placed about 50 feet
apart, and the two rows gradually diverged until at
their extremities they were from 11/2 to 2 miles apart.
  
[Illustration: CREE INDIANS IMPOUNDING BUFFALOES.
Reproduced from Prof. H. Y. Hind’s—­“Red
River, Assinniboine and Saskatchewan Expedition.”]
  
“When the skilled hunters are about to bring
in a herd of buffalo from the prairie,” says
Professor Hind, “they direct the course of the
gallop of the alarmed animals by confederates stationed
in hollows or small depressions, who, when the buffalo
appear inclined to take a direction leading from the
space marked out by the ‘dead men,’ show
themselves for a moment and wave their robes, immediately
hiding again. This serves to turn the buffalo
slightly in another direction, and when the animals,
having arrived between the rows of ‘dead men,’
endeavor to pass through them, Indians stationed here
and there behind a ‘dead man’ go through
the same operation, and thus keep the animals within
the narrowing limits of the converging lines.
At the entrance to the pound there is a strong trunk
of a tree placed about a foot from the ground, and
on the inner side an excavation is made sufficiently
deep to prevent the buffalo from leaping back when
once in the pound. As soon as the animals have
taken the fatal spring, they begin to gallop round
and round the ring fence, looking for a chance to
escape, but with the utmost silence women and children
on the outside hold their robes before every orifice
until the whole herd is brought in; then they climb
to the top of the fence, and, with the hunters who
have followed closely in the rear of the buffalo,
spear or shoot with bows and arrows or fire-arms at
the bewildered animals, rapidly becoming frantic with
rage and terror, within the narrow limits of the pound.
  
“A dreadful scene of confusion and slaughter
then begins; the oldest and strongest animals crush
and toss the weaker; the shouts and screams of the
excited Indians rise above the roaring of the bulls,
the bellowing of the cows, and the piteous moaning
of the calves. The dying struggles of so many
huge and powerful animals crowded together create a
revolting and terrible scene, dreadful from the excess
of its cruelty and waste of life, but with occasional
displays of wonderful brute strength and rage; while
man in his savage, untutored, and heathen state shows
both in deed and expression how little he is superior
to the noble beasts he so wantonly and cruelly destroys."[59]

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[Note 59: Assinniboine and Saskatchewan Expedition,
p. 358.]
  
The last scene of the bloody tragedy is thus set forth
a week later:
  
“Within the circular fence ... lay, tossed in
every conceivable position, over two hundred dead
buffalo. [The exact number was 240.] From old bulls
to calves of three months’ old, animals of every
age were huddled together in all the forced attitudes
of violent death. Some lay on their backs, with
eyes starting from their heads and tongue thrust out
through clotted gore. Others were impaled on the
horns of the old and strong bulls. Others again,
which had been tossed, were lying with broken backs,
two and three deep. One little calf hung suspended
on the horns of a bull which had impaled it in the
wild race round and round the pound. The Indians
looked upon the dreadful and sickening sight with
evident delight, and told how such and such a bull
or cow had exhibited feats of wonderful strength in
the death-struggle. The flesh of many of the
cows had been taken from them, and was drying in the
sun on stages near the tents. It is needless
to say that the odor was overpowering, and millions
of large blue flesh-flies, humming and buzzing over
the putrefying bodies, was not the least disgusting
part of the spectacle.”
  
It is some satisfaction to know that when the first
“run” was made, ten days previous, the
herd of two hundred buffaloes was no sooner driven
into the pound than a wary old bull espied a weak spot
in the fence, charged it at full speed, and burst
through to freedom and the prairie, followed by the
entire herd.
  
Strange as it may seem to-day, this wholesale method
of destroying buffalo was once practiced in Montana.
In his memoir on “The American Bison,”
Mr. J. A. Allen states that as late as 1873, while
journeying through that Territory in charge of the
Yellowstone Expedition, he “several times met
with the remains of these pounds and their converging
fences in the region above the mouth of the Big Horn
River.” Mr. Thomas Simpson states that
in 1840 there were three camps of Assinniboine Indians
in the vicinity of Carlton House, each of which had
its buffalo pound into which they drove forty or fifty
animals daily.
  
4. *The “Surround."*—­During
the last forty years the final extermination of the
buffalo has been confidently predicted by not only
the observing white man of the West, but also nearly
all the Indians and half-breeds who formerly depended
upon this animal for the most of the necessities,
as well as luxuries, of life. They have seen the
great herds driven westward farther and farther, until
the plains were left tenantless, and hunger took the
place of feasting on the choice tid-bits of the chase.
And is it not singular that during this period the
Indian tribes were not moved by a common impulse to
kill sparingly, and by the exercise of a reasonable
economy in the chase to make the buffalo last as long
as possible.

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But apparently no such thoughts ever entered their
minds, so far as *they themselves* were concerned.
They looked with jealous eyes upon the white hunter,
and considered him as much of a robber as if they had
a brand on every buffalo. It has been claimed
by some authors that the Indians killed with more
judgment and more care for the future than did the
white man, but I fail to find any evidence that such
was ever the fact. They all killed wastefully,
wantonly, and always about five times as many head
as were really necessary for food. It was always
the same old story, whenever a gang of Indians needed
meat a whole herd was slaughtered, the choicest portions
of the finest animals were taken, and about 75 per
cent of the whole left to putrefy and fatten the wolves.
And now, as we read of the appalling slaughter, one
can scarcely repress the feeling of grim satisfaction
that arises when we also read that many of the ex-slaughterers
are almost starving for the millions of pounds of
fat and juicy buffalo meat they wasted a few years
ago. Verily, the buffalo is in a great measure
avenged already.
  
The following extract from Mr. Catlin’s “North
American Indians,"[60] I, page 199-200, serves well
to illustrate not only a very common and very deadly
Indian method of wholesale slaughter—­the
“surround”—­but also to show
the senseless destructiveness of Indians even when
in a state of semi-starvation, which was brought upon
them by similar acts of improvidence and wastefulness.
  
[Note 60: H. Mis. 600, pt. 2-31]
  
“The Minatarees, as well as the Mandans, had
suffered for some months past for want of meat, and
had indulged in the most alarming fears that the herds
of buffalo were emigrating so far off from them that
there was great danger of their actual starvation,
when it was suddenly announced through the village
one morning at an early hour that a herd of buffaloes
was in sight. A hundred or more young men mounted
their horses, with weapons in hand, and steered their
course to the prairies. \* \* \*
  
“The plan of attack, which in this country is
familiarly called a surround, was explicitly agreed
upon, and the hunters, who were all mounted on their
‘buffalo horses’ and armed with bows and
arrows or long lances, divided into two columns, taking
opposite directions, and drew themselves gradually
around the herd at a mile or more distance from them,
thus forming a circle of horsemen at equal distances
apart, who gradually closed in upon them with a moderate
pace at a signal given. The unsuspecting herd
at length ‘got the wind’ of the approaching
enemy and fled in a mass in the greatest confusion.
To the point where they were aiming to cross the line
the horsemen were seen, at full speed, gathering and
forming in a column, brandishing their weapons, and
yelling in the most frightful manner, by which they
turned the black and rushing mass, which moved off
in an opposite direction, where they were again met

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and foiled in a similar manner, and wheeled back in
utter confusion; by which time the horsemen had closed
in from all directions, forming a continuous line
around them, whilst the poor affrighted animals were
eddying about in a crowded and confused mass, hooking
and climbing upon each other, when the work of death
commenced. I had rode up in the rear and occupied
an elevated position at a few rods’ distance,
from which I could (like the general of a battlefield)
survey from my horse’s back the nature and the
progress of the grand *mêlée*, but (unlike him)
without the power of issuing a command or in any way
directing its issue.
  
“In this grand turmoil [see illustration] a
cloud of dust was soon raised, which in parts obscured
the throng where the hunters were galloping their
horses around and driving the whizzing arrows or their
long lances to the hearts of these noble animals; which
in many instances, becoming infuriated with deadly
wounds in their sides, erected their shaggy manes
over their bloodshot eyes and furiously plunged forward
at the sides of their assailants’ horses, sometimes
goring them to death at a lunge and putting their dismounted
riders to flight for their lives. Sometimes their
dense crowd was opened, and the blinded horsemen,
too intent on their prey amidst the cloud of dust,
were hemmed and wedged in amidst the crowding beasts,
over whose backs they were obliged to leap for security,
leaving their horses to the fate that might await
them in the results of this wild and desperate war.
Many were the bulls that turned upon their assailants
and met them with desperate resistance, and many were
the warriors who were dismounted and saved themselves
by the superior muscles of their legs; some who were
closely pursued by the bulls wheeled suddenly around,
and snatching the part of a buffalo robe from around
their waists, threw it over the horns and eyes of
the infuriated beast, and darting by its side drove
the arrow or the lance to its heart; others suddenly
dashed off upon the prairie by the side of the affrighted
animals which had escaped from the throng, and closely
escorting them for a few rods, brought down their
heart’s blood in streams and their huge carcasses
upon the green and enameled turf.
  
“In this way this grand hunt soon resolved itself
into a desperate battle, *and in the space of fifteen
minutes resulted in the total destruction of the whole
herd*, which in all their strength and fury were
doomed, like every beast and living thing else, to
fall before the destroying hands of mighty man.
  
“I had sat in trembling silence upon my horse
and witnessed this extraordinary scene, which allowed
not one of these animals to escape out of my sight.
Many plunged off upon the prairie for a distance, but
were overtaken and killed, and although I could not
distinctly estimate the number that were slain, yet
I am sure that some hundreds of these noble animals
fell in this grand *mêlée*. \* \* \* Amongst the

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poor affrighted creatures that had occasionally dashed
through the ranks of their enemy and sought safety
in flight upon the prairie (and in some instances
had undoubtedly gained it), I saw them stand awhile,
looking back, when they turned, and, as if bent on
their own destruction, retraced their steps, and mingled
themselves and their deaths with those of the dying
throng. Others had fled to a distance on the prairies,
and for want of company, of friends or of foes, had
stood and gazed on till the battle-scene was over,
seemingly taking pains to stay and hold their lives
in readiness for their destroyers until the general
destruction was over, when they fell easy victims
to their weapons, making the slaughter complete.”
  
It is to be noticed that *every animal* of this
entire herd of several hundred was slain on the spot,
and there is no room to doubt that at least half (possibly
much more) of the meat thus taken was allowed to become
a loss. People who are so utterly senseless as
to wantonly destroy their own source of food, as the
Indians have done, certainly deserve to starve.
  
This “surround” method of wholesale slaughter
was also practiced by the Cheyennes, Arapahoes, Sioux,
Pawnees, Ornabas, and probably many other tribes.
  
[Illustration: THE SURROUND. From a painting
in the National Museum by George Catlin.]
  
5. *Decoying and Driving.*—­Another
method of slaughtering by wholesale is thus described
by Lewis and Clarke, I, 235. The locality indicated
was the Missouri River, in Montana, just above the
mouth of Judith River:
  
“On the north we passed a precipice about 120
feet high, under which lay scattered the fragments
of at least one hundred carcasses of buffaloes, although
the water which had washed away the lower part of the
hill, must have carried off many of the dead.
These buffaloes had been chased down a precipice in
a way very common on the Missouri, and by which vast
herds are destroyed in a moment. The mode of hunting
is to select one of the most active and fleet young
men, who is disguised by a buffalo skin round his
body; the skin of the head with the ears and horns
fastened on his own head in such a way as to deceive
the buffaloes. Thus dressed, he fixes himself
at a convenient distance between a herd of buffaloes
and any of the river precipices, which sometimes extend
for some miles.
  
“His companions in the mean time get in the
rear and side of the herd, and at a given signal show
themselves, and advance towards the buffaloes.
They instantly take alarm, and, finding the hunters
beside them, they run toward the disguised Indian
or decoy, who leads them on at full speed toward the
river, when, suddenly securing himself in some crevice
of the cliff which he had previously fixed on, the
herd is left on the brink of the precipice; it is
then in vain for the foremost to retreat or even to
stop; they are pressed on by the hindmost rank, who,
seeing no danger but from the hunters, goad on those

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before them till the whole are precipitated and the
shore is strewed with their dead bodies. Sometimes
in this perilous seduction the Indian is himself either
trodden under foot by the rapid movements of the buffaloes,
or, missing his footing in the cliff, is urged down
the precipice by the falling herd. The Indians
then select as much meat as they wish, and the rest
is abandoned to the wolves, and creates a most dreadful
stench.”
  
Harper’s Magazine, volume 38, page 147, contains
the following from the pen of Theo. E. Davis,
in an article entitled “The Buffalo Range:”
  
“As I have previously stated, the best hunting
on the range is to be found between the Platte and
Arkansas Rivers. Here I have seen the Indians
have recourse to another method of slaughtering buffalo
in a very easy, but to me a cruel way, for where one
buffalo is killed several are sure to be painfully
injured; but these, too, are soon killed by the Indians,
who make haste to lance or shoot the cripples.
  
“The mode of hunting is somewhat as follows:
A herd is discovered grazing on the table-lands.
Being thoroughly acquainted with the country, the
Indians are aware of the location of the nearest point
where the table land is broken abruptly by a precipice
which descends a hundred or more feet. Toward
this ‘devil-jump’ the Indians head the
herd, which is at once driven pell mell to and over
the precipice. Meanwhile a number of Indians
have taken their way by means of routes known to them,
and succeed in reaching the cañon through which the
crippled buffalo are running in all directions.
These are quickly killed, so that out of a very considerable
band of buffalo but few escape, many having been killed
by the fall and others dispatched while limping off.
This mode of hunting is sometimes indulged in by harum-scarum
white men, but it is done more for deviltry than anything
else. I have never known of its practice by army
officers or persons who professed to hunt buffalo
as a sport.”
  
6. *Hunting on Snow-shoes.*—­“In
the dead of the winters,” says Mr. Catlin,[61]
“which are very long and severely cold in this
country, where horses can not be brought into the
chase with any avail, the Indian runs upon the surface
of the snow by aid of his snow-shoes, which buoy him
up, while the great weight of the buffaloes sinks them
down to the middle of their sides, and, completely
stopping their progress, insures them certain and
easy victims to the bow or lance of their pursuers.
The snow in these regions often lies during the winter
to the depth of 3 and 4 feet, being blown away from
the tops and sides of the hills in many places, which
are left bare for the buffaloes to graze upon, whilst
it is drifted in the hollows and ravines to a very
great depth, and rendered almost entirely impassable
to these huge animals, which, when closely pursued
by their enemies, endeavor to plunge through it, but
are soon wedged in and almost unable to move, where

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they fall an easy prey to the Indian, who runs up
lightly upon his snow-shoes and drives his lance to
their hearts. The skins are then stripped off,
to be sold to the fur traders, and the carcasses left
to be devoured by the wolves. [Owing to the fact that
the winter’s supply of meat was procured and
dried in the summer and fall months, the flesh of all
buffalo killed in winter was allowed to become a total
loss.] This is the season in which the greatest number
of these animals are destroyed for their robes; they
are most easily killed at this time, and their hair
or fur, being longer and more abundant, gives greater
value to the robe.”
  
[Note 61: North American Indians, I, 253.]
  
\* \* \* \*
\*

**III.  PROGRESS OF THE EXTERMINATION.**

A. THE PERIOD OF DESULTORY DESTRUCTION, FROM 1730
TO 1830.
  
[Illustration: INDIANS ON SNOW-SHOES HUNTING
BUFFALOES. From a painting in the National Museum
by George Catlin.]
  
The disappearance of the buffalo from all the country
east of the Mississippi was one of the inevitable
results of the advance of civilization. To the
early pioneers who went forth into the wilderness
to wrestle with nature for the necessities of life,
this valuable animal might well have seemed a gift
direct from the hand of Providence. During the
first few years of the early settler’s life in
a new country, the few domestic animals he had brought
with him were far too valuable to be killed for food,
and for a long period he looked to the wild animals
of the forest and the prairie for his daily supply
of meat. The time was when no one stopped to
think of the important part our game animals played
in the settlement of this country, and even now no
one has attempted to calculate the lessened degree
of rapidity with which the star of empire would have
taken its westward way without the bison, deer, elk,
and antelope. The Western States and Territories
pay little heed to the wanton slaughter of deer and
elk now going on in their forests, but the time will
soon come when the “grangers” will enter
those regions and find the absence of game a very serious
matter.
  
Although the bison was the first wild species to disappear
before the advance of civilization, he served a good
purpose at a highly critical period. His huge
bulk of toothsome flesh fed many a hungry family, and
his ample robe did good service in the settler’s
cabin and sleigh in winter weather. By the time
game animals had become scarce, domestic herds and
flocks had taken their place, and hunting became a
pastime instead of a necessity.

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As might be expected, from the time the bison was
first seen by white men he has always been a conspicuous
prize, and being the largest of the land quadrupeds,
was naturally the first to disappear. Every man’s
hand has been against him. While his disappearance
from the eastern United States was, in the main, due
to the settler who killed game as a means of subsistence,
there were a few who made the killing of those animals
a regular business. This occurred almost exclusively
in the immediate vicinity of salt springs, around
which the bison congregated in great numbers, and
made their wholesale slaughter of easy accomplishment.
Mr. Thomas Ashe[62] has recorded some very interesting
facts and observations on this point. In speaking
of an old man who in the latter part of the last century
built a log house for himself “on the immediate
borders of a salt spring,” in western Pennsylvania,
for the purpose of killing buffaloes out of the immense
droves which frequented that spot, Mr. Ashe says:
  
[Note 62: Travels in America in 1806. London,
1808.]
  
“In the first and second years this old man,
with some companions, killed from six to seven hundred
of these noble creatures merely for the sake of their
skins, which to them were worth only 2 shillings each;
and after this ‘work of death’ they were
obliged to leave the place till the following season,
or till the wolves, bears, panthers, eagles, rooks,
ravens, *etc*., had devoured the carcasses and abandoned
the place for other prey. In the two following
years the same persons killed great numbers out of
the first droves that arrived, skinned them, and left
their bodies exposed to the sun and air; but they soon
had reason to repent of this, for the remaining droves,
as they came up in succession, stopped, gazed on the
mangled and putrid bodies, sorrowfully moaned or furiously
lowed aloud, and returned instantly to the wilderness
in an unusual run, without tasting their favorite
spring or licking the impregnated earth, which was
also once their most agreeable occupation; nor did
they nor any of their race ever revisit the neighborhood.
  
“The simple history of this spring is that of
every other in the settled parts of this Western World;
the carnage of beasts was everywhere the same.
I met with a man who had killed two thousand buffaloes
with his own hand, and others no doubt have done the
same thing. In consequence of such proceedings
not one buffalo is at this time to be found east of
the Mississippi, except a few domesticated by the curious,
or carried through the country on a public show.”
  
But, fortunately, there is no evidence that such slaughter
as that described by Mr. Ashe was at all common, and
there is reason for the belief that until within the
last forty years the buffalo was sacrificed in ways
conducive to the greatest good of the greatest number.
  
From Coronado to General Frémont there has hardly
been an explorer of United States territory who has
not had occasion to bless the bison, and its great
value to mankind can hardly be overestimated, although
by many it can readily be forgotten.

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The disappearance of the bison from the eastern United
States was due to its consumption as food. It
was very gradual, like the march of civilization,
and, under the circumstances, absolutely inevitable.
In a country so thickly peopled as this region speedily
became, the mastodon could have survived extinction
about as easily as the bison. Except when the
latter became the victim of wholesale slaughter, there
was little reason to bemoan his fate, save upon grounds
that may be regarded purely sentimental. He served
a most excellent purpose in the development of the
country. Even as late as 1875 the farmers of eastern
Kansas were in the habit of making trips every fall
into the western part of that State for wagon loads
of buffalo meat as a supply for the succeeding winter.
The farmers of Texas, Nebraska, Dakota, and Minnesota
also drew largely upon the buffalo as long as the
supply lasted.
  
The extirpation of the bison west of the Rocky Mountains
was due to legitimate hunting for food and clothing
rather than for marketable peltries. In no part
of that whole region was the species ever numerous,
although in the mountains themselves, notably in Colorado,
within easy reach of the great prairies on the east,
vast numbers were seen by the early explorers and
pioneers. But to the westward, away from the
mountains, they were very rarely met with, and their
total destruction in that region was a matter of easy
accomplishment. According to Prof. J. A.
Allen the complete disappearance of the bison west
of the Rocky Mountains took place between 1838 and
1840.
  
B. THE PERIOD OF SYSTEMATIC SLAUGHTER, FROM 1830 TO
1838.
  
We come now to a history which I would gladly leave
unwritten. Its record is a disgrace to the American
people in general, and the Territorial, State, and
General Government in particular. It will cause
succeeding generations to regard us as being possessed
of the leading characteristics of the savage and the
beast of prey—­cruelty and greed. We
will be likened to the blood-thirsty tiger of the Indian
jungle, who slaughters a dozen bullocks at once when
he knows he can eat only one.
  
In one respect, at least, the white men who engaged
in the systematic slaughter of the bison were savages
just as much as the Piegan Indians, who would drive
a whole herd over a precipice to secure a week’s
rations of meat for a single village. The men
who killed buffaloes for their tongues and those who
shot them from the railway trains for sport were murderers.
In no way does civilized man so quickly revert to his
former state as when he is alone with the beasts of
the field. Give him a gun and something which
he may kill without getting himself in trouble, and,
presto! he is instantly a savage again, finding exquisite
delight in bloodshed, slaughter, and death, if not
for gain, then solely for the joy and happiness of
it. There is no kind of warfare against game
animals too unfair, too disreputable, or too mean for

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white men to engage in if they can only do so with
safety to their own precious carcasses. They
will shoot buffalo and antelope from running railway
trains, drive deer into water with hounds and cut their
throats in cold blood, kill does with fawns a week
old, kill fawns by the score for their spotted skins,
slaughter deer, moose, and caribou in the snow at a
pitiful disadvantage, just as the wolves do; exterminate
the wild ducks on the whole Atlantic seaboard with
punt guns for the metropolitan markets; kill off the
Rocky Mountain goats for hides worth only 50 cents
apiece, destroy wagon loads of trout with dynamite,
and so on to the end of the chapter.
  
Perhaps the most gigantic task ever undertaken on
this continent in the line of game-slaughter was the
extermination of the bison in the great pasture region
by the hide-hunters. Probably the brilliant rapidity
and success with which that lofty undertaking was
accomplished was a matter of surprise even to those
who participated in it. The story of the slaughter
is by no means a long one.
  
The period of systematic slaughter of the bison naturally
begins with the first organized efforts in that direction,
in a business-like, wholesale way. Although the
species had been steadily driven westward for a hundred
years by the advancing settlements, and had during
all that time been hunted for the meat and robes it
yielded, its extermination did not begin in earnest
until 1820, or thereabouts. As before stated,
various persons had previous to that time made buffalo
killing a business in order to sell their skins, but
such instances were very exceptional. By that
time the bison was totally extinct in all the region
lying east of the Mississippi River except a portion
of Wisconsin, where it survived until about 1830.
In 1820 the first organized buffalo hunting expedition
on a grand scale was made from the Red River settlement,
Manitoba, in which five hundred and forty carts proceeded
to the range. Previous to that time the buffaloes
were found near enough to the settlements around Fort
Garry that every settler could hunt independently;
but as the herds were driven farther and farther away,
it required an organized effort and a long journey
to reach them.
  
The American Fur Company established trading posts
along the Missouri River, one at the mouth of the
Tetón River and another at the mouth of the Yellowstone.
In 1826 a post was established at the eastern base
of the Rocky Mountains, at the head of the Arkansas
River, and in 1832 another was located in a corresponding
situation at the head of the South Fork of the Platte,
close to where Denver now stands. Both the latter
were on what was then the western border of the buffalo
range. Elsewhere throughout the buffalo country
there were numerous other posts, always situated as
near as possible to the best hunting ground, and at
the same time where they would be most accessible to
the hunters, both white and red.

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As might be supposed, the Indians were encouraged
to kill buffaloes for their robes, and this is what
Mr. George Catlin wrote at the mouth of the Tetón
River (Pyatt County, Dakota) in 1832 concerning this
trade:[63]
  
“It seems hard and cruel (does it not?) that
we civilized people, with all the luxuries and comforts
of the world about us, should be drawing from the
backs of these useful animals the skins for our luxury,
leaving their carcasses to be devoured by the wolves;
that we should draw from that country some one hundred
and fifty or two hundred thousand of their robes annually,
the greater part of which are taken from animals that
are killed expressly for the robe, at a season when
the meat is not cured and preserved, and for each
of which skins the Indian has received but a pint
of whisky! Such is the fact, and that number,
or near it, are annually destroyed, in addition to
the number that is necessarily killed for the subsistence
of three hundred thousand Indians, who live chiefly
upon them.”
  
The author further declared that the fur trade in
those “great western realms” was then
limited chiefly to the purchase of buffalo robes.
  
1. *The Red River half-breeds.*—­In
June, 1840, when the Red River half-breeds assembled
at Pembina for their annual expedition against the
buffalo, they mustered as follows:
+-------------------------------------+
|Carts |1,210|
+-------------------------+-----+-----+
|Hunters | 620| |
+-------------------------+-----+ |
|Women | 650|1,630|
+-------------------------+-----+ |
|Boys and girls | 360| |
+-------------------------+-----+-----+
|Horses (buffalo runners) | 403|
+-------------------------------+-----+
|Dogs | 542|
+-------------------------------+-----+
|Cart horses | 655|
+-------------------------------+-----+
|Draught oxen | 586|
+-------------------------------+-----+
|Skinning knives |1,240|
+-------------------------------------+
  
The total value of the property employed in this expedition
and the working time occupied by it (two months) amounted
to the enormous sum of £24,000.
  
[Note 63: North American Indians, I, p. 263.]
  
Although the bison formerly ranged to Fort Garry (near
Winnipeg), they had been steadily killed off and driven
back, and in 1840 none were found by the expedition
until it was 250 miles from Pembina, which is situated
on the Red River, at the international boundary.
At that time the extinction of the species from the
Red River to the Cheyenne was practically complete.
The Red River settlers, aided, of course, by the Indians
of that region, are responsible for the extermination
of the bison throughout northeastern Dakota as far
as the Cheyenne River, northern Minnesota, and the
whole of what is now the province of Manitoba.
More than that; as the game grew scarce and retired
farther and farther, the half-breeds, who despised
agriculture as long as there was a buffalo to kill,
extended their hunting operations westward along the
Qu’Appelle until they encroached upon the hunting-grounds
of the Plain Crees, who lived in the Saskatchewan
country.

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Thus was an immense inroad made in the northern half
of the herd which had previously covered the entire
pasture region from the Great Slave Lake to central
Texas. This was the first visible impression of
the systematic killing which began in 1820. Up
to 1840 it is reasonably certain, as will be seen
by figures given elsewhere, that by this business-like
method of the half-breeds, at least 652,000 buffaloes
were destroyed by them alone.
  
Even as early as 1840 the Red River hunt was prosecuted
through Dakota southwestwardly to the Missouri River
and a short distance beyond it. Here it touched
the wide strip of territory, bordering that stream,
which was even then being regularly drained of its
animal resources by the Indian hunters, who made the
river their base of operations, and whose robes were
shipped on its steam-boats.
  
It is certain that these annual Red River expeditions
into Dakota were kept up as late as 1847, and as long
thereafter as buffaloes were to be found in any number
between the Cheyenne and the Missouri. At the
same time, the White Horse Plains division, which
hunted westward from Fort Garry, did its work of destruction
quite as rapidly and as thoroughly as the rival expedition
to the United States.
  
In 1857 the Plains Crees, inhabiting the country around
the headwaters of the Qu’Appelle River (250
miles due west from Winnipeg), assembled in council,
and “determined that in consequence of promises
often made and broken by the white men and half-breeds,
and the rapid destruction by them of the buffalo they
fed on, they would not permit either white men or
half-breeds to hunt in their country, or travel through
it, except for the purpose of trading for their dried
meat, pemmican, skins and robes.”
  
In 1858 the Crees reported that between the two branches
of the Saskatchewan buffalo were “very scarce.”
Professor Hind’s expedition saw only one buffalo
in the whole course of their journey from Winnipeg
until they reached Sand Hill Lake, at the head of the
Qu’Appelle, near the south branch of the Saskatchewan,
where the first herd was encountered. Although
the species was not totally extinct on the Qu’Appelle
at that time, it was practically so.
  
2. *The country of the Sioux.*—­The
next territory completely depopulated of buffaloes
by systematic hunting was very nearly the entire southern
half of Dakota, southwestern Minnesota, and northern
Nebraska as far as the North Platte. This vast
region, once the favorite range for hundreds of thousands
of buffaloes, had for many years been the favorite
hunting ground of the Sioux Indians of the Missouri,
the Pawnees, Omahas, and all other tribes of that
region. The settlement of Iowa and Minnesota
presently forced into this region the entire body of
Mississippi Sioux from the country west of Prairie
du Chien and around Fort Snelling, and materially
hastened the extermination of all the game animals
which were once so abundant there. It is absolutely

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certain that if the Indians had been uninfluenced
by the white traders, or, in other words, had not
been induced to take and prepare a large number of
robes every year for the market, the species would
have survived very much longer than it did. But
the demand quickly proved to be far greater than the
supply. The Indians, of course, found it necessary
to slaughter annually a great number of buffaloes
for their own wants—­for meat, robes, leather,
teepees, *etc*. When it came to supplementing
this necessary slaughter by an additional fifty thousand
or more every year for marketable robes, it is no
wonder that the improvident savages soon found, when
too late, that the supply of buffaloes was not inexhaustible.
Naturally enough, they attributed their disappearance
to the white man, who was therefore a robber, and
a proper subject for the scalping-knife. Apparently
it never occurred to the minds of the Sioux that they
themselves were equally to blame; it was always *the
paleface* who killed the buffaloes; and it was
always *Sioux* buffaloes that they killed.
The Sioux seemed to feel that they held a chattel mortgage
on all the buffaloes north of the Platte, and it required
more than one pitched battle to convince them otherwise.
  
Up to the time when the great Sioux Reservation was
established in Dakota (1875-’77), when 33,739
square miles of country, or nearly the whole southwest
quarter of the Territory, was set aside for the exclusive
occupancy of the Sioux, buffaloes were very numerous
throughout that entire region. East of the Missouri
River, which is the eastern boundary of the Sioux
Reservation, from Bismarck all the way down, the species
was practically extinct as early as 1870. But
at the time when it became unlawful for white hunters
to enter the territory of the Sioux nation there were
tens of thousands of buffaloes upon it, and their
subsequent slaughter is chargeable to the Indians alone,
save as to those which migrated into the hunting grounds
of the whites.
  
3. *Western railways, and their part in the extermination
of the buffalo.*—­The building of a railroad
means the speedy extermination of all the big game
along its line. In its eagerness to attract the
public and build up “a big business,”
every new line which traverses a country containing
game does its utmost, by means of advertisements and
posters, to attract the man with a gun. Its game
resorts are all laid bare, and the market hunters
and sportsmen swarm in immediately, slaying and to
slay.
  
Within the last year the last real retreat for our
finest game, the only remaining stronghold for the
mountain sheep, goat, caribou, elk, and deer—­northwestern
Montana, northern Idaho, and thence westward—­has
been laid open to the very heart by the building of
the St. Paul, Minneapolis and Manitoba Railway, which
runs up the valley of the Milk River to Fort Assinniboine,
and crosses the Rocky Mountains through Two Medicine
Pass. Heretofore that region has been so difficult
to reach that the game it contains has been measurably
secure from general slaughter; but now it also must
“go.”

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The marking out of the great overland trail by the
Argonauts of ’49 in their rush for the gold
fields of California was the foreshadowing of the
great east-and-west breach in the universal herd, which
was made twenty years later by the first transcontinental
railway.
  
The pioneers who “crossed the plains”
in those days killed buffaloes for food whenever they
could, and the constant harrying of those animals
experienced along the line of travel, soon led them
to retire from the proximity of such continual danger.
It was undoubtedly due to this cause that the number
seen by parties who crossed the plains in 1849 and
subsequently, was surprisingly small. But, fortunately
for the buffaloes, the pioneers who would gladly have
halted and turned aside now and then for the excitement
of the chase, were compelled to hurry on, and accomplish
the long journey while good weather lasted. It
was owing to this fact, and the scarcity of good horses,
that the buffaloes found it necessary to retire only
a few miles from the wagon route to get beyond the
reach of those who would have gladly hunted them.
  
Mr. Allen Varner, of Indianola, Illinois, has kindly
furnished me with the following facts in regard to
the presence of the buffalo, as observed by him during
his journey westward, over what was then known as
the Oregon Trail.
  
“The old Oregon trail ran from Independence,
Missouri, to old Fort Laramie, through the South Pass
of the Rocky Mountains, and thence up to Salt Lake
City. We left Independence on May C, 1849, and
struck the Platte River at Grand Island. The
trail had been traveled but very little previous to
that year. We saw no buffaloes whatever until
we reached the forks of the Platte, on May 20, or
thereabouts. There we saw seventeen head.
From that time on we saw small bunches now and then;
never more than forty or fifty together. We saw
no great herds anywhere, and I should say we did not
see over five hundred head all told. The most
western point at which we saw buffaloes was about due
north of Laramie Peak, and it must have been about
the 20th of June. We killed several head for
meat during our trip, and found them all rather thin
in flesh. Plainsmen who claimed to know, said
that all the buffaloes we saw had wintered in that
locality, and had not had time to get fat. The
annual migration from the south had not yet begun,
or rather had not yet brought any of the southern
buffaloes that far north.”
  
In a few years the tide of overland travel became
so great, that the buffaloes learned to keep away
from the dangers of the trail, and many a pioneer
has crossed the plains without ever seeing a live buffalo.

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4. *The division of the universal herd.*—­Until
the building of the first transcontinental railway
made it possible to market the “buffalo product,”
buffalo hunting as a business was almost wholly in
the hands of the Indians. Even then, the slaughter
so far exceeded the natural increase that the narrowing
limits of the buffalo range was watched with anxiety,
and the ultimate extinction of the species confidently
predicted. Even without railroads the extermination
of the race would have taken place eventually, but
it would have been delayed perhaps twenty years.
With a recklessness of the future that was not to be
expected of savages, though perhaps perfectly natural
to civilized white men, who place the possession of
a dollar above everything else, the Indians with one
accord singled out the *cows* for slaughter, because
their robes and their flesh better suited the fastidious
taste of the noble redskin. The building of the
Union Pacific Railway began at Omaha in 1865, and
during that year 40 miles were constructed. The
year following saw the completion of 265 miles more,
and in 1867 245 miles were added, which brought it
to Cheyenne. In 1868, 350 miles were built, and
in 1869 the entire line was open to traffic.
  
In 1867, when Maj. J. W. Powell and Prof.
A. H. Thompson crossed the plains by means of the
Union Pacific Railway as far as it was constructed
and thence onward by wagon, they saw during the entire
trip only one live buffalo, a solitary old bull, wandering
aimlessly along the south bank of the Platte River.
  
The completion of the Union Pacific Railway divided
forever the buffaloes of the United States into two
great herds, which thereafter became known respectively
as the northern and southern herds. Both retired
rapidly and permanently from the railway, and left
a strip of country over 50 miles wide almost uninhabited
by them. Although many thousand buffaloes were
killed by hunters who made the Union Pacific Railway
their base of operations, the two great bodies retired
north and south so far that the greater number were
beyond striking distance from that line.
  
5. *The destruction of the southern herd.*—­The
geographical center of the great southern herd during
the few years of its separate existence previous to
its destruction was very near the present site of Garden
City, Kansas. On the east, even as late as 1872,
thousands of buffaloes ranged within 10 miles of Wichita,
which was then the headquarters of a great number
of buffalo-hunters, who plied their occupation vigorously
during the winter. On the north the herd ranged
within 25 miles of the Union Pacific, until the swarm
of hunters coming down from the north drove them farther
and farther south. On the west, a few small bands
ranged as far as Pike’s Peak and the South Park,
but the main body ranged east of the town of Pueblo,
Colorado. In the southwest, buffaloes were abundant
as far as the Pecos and the Staked Plains, while the

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southern limit of the herd was about on a line with
the southern boundary of New Mexico. Regarding
this herd, Colonel Dodge writes as follows: “Their
most prized feeding ground was the section of country
between the South Platte and Arkansas rivers, watered
by the Republican, Smoky, Walnut, Pawnee, and other
parallel or tributary streams, and generally known
as the Republican country. Hundreds of thousands
went south from here each winter, but hundreds of
thousands remained. It was the chosen home of
the buffalo.”
  
Although the range of the northern herd covered about
twice as much territory as did the southern, the latter
contained probably twice as many buffaloes. The
number of individuals in the southern herd in the
year 1871 must have been at least three millions, and
most estimates place the total much higher than that.
  
During the years from 1866 to 1871, inclusive, the
Atchison, Topeka and Santa Fé Railway and what is
now known as the Kansas Pacific, or Kansas division
of the Union Pacific Railway, were constructed from
the Missouri River westward across Kansas, and through
the heart of the southern buffalo range. The
southern herd was literally cut to pieces by railways,
and every portion of its range rendered easily accessible.
There had always been a market for buffalo robes at
a fair price, and as soon as the railways crossed
the buffalo country the slaughter began. The
rush to the range was only surpassed by the rush to
the gold mines of California in earlier years.
The railroad builders, teamsters, fortune-seekers,
“professional” hunters, trappers, guides,
and every one out of a job turned out to hunt buffalo
for hides and meat. The merchants who had already
settled in all the little towns along the three great
railways saw an opportunity to make money out of the
buffalo product, and forthwith began to organize and
supply hunting parties with arms, ammunition, and
provisions, and send them to the range. An immense
business of this kind was done by the merchants of
Dodge City (Fort Dodge), Wichita, and Leavenworth,
and scores of smaller towns did a corresponding amount
of business in the same line. During the years
1871 to 1874 but little else was done in that country
except buffalo killing. Central depots were established
in the best buffalo country, from whence hunting parties
operated in all directions. Buildings were erected
for the curing of meat, and corrals were built in
which to heap up the immense piles of buffalo skins
that accumulated. At Dodge City, as late as 1878,
Professor Thompson saw a lot of baled buffalo skins
in a corral, the solid cubical contents of which he
calculated to equal 120 cords.

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At first the utmost wastefulness prevailed. Every
one wanted to kill buffalo, and no one was willing
to do the skinning and curing. Thousands upon
thousands of buffaloes were killed for their tongues
alone, and never skinned. Thousands more were
wounded by unskillful marksmen and wandered off to
die and become a total loss. But the climax of
wastefulness and sloth was not reached until the enterprising
buffalo-butcher began to skin his dead buffaloes by
horse-power. The process is of interest, as showing
the depth of degradation to which a man can fall and
still call himself a hunter. The skin of the buffalo
was ripped open along the belly and throat, the legs
cut around at the knees, and ripped up the rest of
the way. The skin of the neck was divided all
the way around at the back of the head, and skinned
back a few inches to afford a start. A stout
iron bar, like a hitching post, was then driven through
the skull and about 18 inches into the earth, after
which a rope was tied very firmly to the thick skin
of the neck, made ready for that purpose. The
other end of this rope was then hitched to the whiffletree
of a pair of horses, or to the rear axle of a wagon,
the horses were whipped up, and the skin was forthwith
either torn in two or torn off the buffalo with about
50 pounds of flesh adhering to it. It soon became
apparent to even the most enterprising buffalo skinner
that this method was not an unqualified success, and
it was presently abandoned.
  
The slaughter which began in 1871 was prosecuted with
great vigor and enterprise in 1872, and reached its
heighten 1873. By that time, the buffalo country
fairly swarmed with hunters, each, party putting forth
its utmost efforts to destroy more buffaloes than its
rivals. By that time experience had taught the
value of thorough organization, and the butchering
was done in a more business-like way. By a coincidence
that proved fatal to the bison, it was just at the
beginning of the slaughter that breech-loading, long-range
rifles attained what was practically perfection.
The Sharps 40-90 or 45-120, and the Remington were
the favorite weapons of the buffalo-hunter, the former
being the one in most general use. Before the
leaden hail of thousands of these deadly breech-loaders
the buffaloes went down at the rate of several thousand
daily during the hunting season.
  
During the years 1871 and 1872 the most wanton wastefulness
prevailed. Colonel Dodge declares that, though
hundreds of thousands of skins were sent to market,
they scarcely indicated the extent of the slaughter.
Through want of skill in shooting and want of knowledge
in preserving the hides of those slain by green hunters,
*one hide sent to market represented three, four,
or even five dead buffalo*. The skinners and
curers knew so little of the proper mode of curing
hides, that at least half of those actually taken
were lost. In the summer and fall of 1872 one
hide sent to market represented at least *three*
dead buffalo. This condition of affairs rapidly
improved; but such was the furor for slaughter, and
the ignorance of all concerned, that every hide sent
to market in 1871 represented no less than *five*
dead buffalo.

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By 1873 the condition of affairs had somewhat improved,
through better organization of the hunting parties
and knowledge gained by experience in curing.
For all that, however, buffaloes were still so exceedingly
plentiful, and shooting was so much easier than skinning,
the latter was looked upon as a necessary evil and
still slighted to such an extent that every hide actually
sold and delivered represented two dead buffaloes.
  
In 1874 the slaughterers began to take alarm at the
increasing scarcity of buffalo, and the skinners,
having a much smaller number of dead animals to take
care of than ever before, were able to devote more
time to each subject and do their work properly.
As a result, Colonel Dodge estimated that during 1874,
and from that time on, one hundred skins delivered
represented not more than one hundred and twenty-five
dead buffaloes; but that “no parties have ever
got the proportion lower than this.”
  
The great southern herd was slaughtered by still-hunting,
a method which has already been fully described.
A typical hunting party is thus described by Colonel
Dodge:[64]
  
“The most approved party consisted of four men—­one
shooter, two skinners, and one man to cook, stretch
hides, and take care of camp. Where buffalo were
very plentiful the number of skinners was increased.
A light wagon, drawn by two horses or mules, takes
the outfit into the wilderness, and brings into camp
the skins taken each day. The outfit is most
meager: a sack of flour, a side of bacon, 5 pounds
of coffee, tea, and sugar, a little salt, and possibly
a few beans, is a month’s supply. A common
or “A” tent furnishes shelter; a couple
of blankets for each man is a bed. One or more
of Sharps or Remington’s heaviest sporting rifles,
and an unlimited supply of ammunition, is the armament;
while a coffee-pot, Dutch-oven, frying-pan, four tin
plates, and four tin cups constitute the kitchen and
table furniture.
  
“The skinning knives do duty at the platter,
and ’fingers were made before forks.’
Nor must be forgotten one or more 10-gallon kegs for
water, as the camp may of necessity be far away from
a stream. The supplies are generally furnished
by the merchant for whom the party is working, who,
in addition, pays each of the party a specified percentage
of the value of the skins delivered. The shooter
is carefully selected for his skill and knowledge
of the habits of the buffalo. He is captain and
leader of the party. When all is ready, he plunges
into the wilderness, going to the center of the best
buffalo region known to him, not already occupied
(for there are unwritten regulations recognized as
laws, giving to each hunter certain rights of discovery
and occupancy). Arrived at the position, he makes
his camp in some hidden ravine or thicket, and makes
all ready for work.”
  
[Note 64: Plains of the Great West, p. 134.]

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Of course the slaughter was greatest along the lines
of the three great railways—­the Kansas
Pacific, the Atchison, Topeka and Santa Fé, and the
Union Pacific, about in the order named. It reached
its height in the season of 1873. During that
year the Atchison, Topeka and Santa Fé Railroad carried
out of the buffalo country 251,443 robes, 1,017,600
pounds of meat, and 2,743,100 pounds of bones.
The end of the southern herd was then near at hand.
Could the southern buffalo range have been roofed
over at that time it would have made one vast charnel-house.
Putrifying carcasses, many of them with the hide still
on, lay thickly scattered over thousands of square
miles of the level prairie, poisoning the air and
water and offending the sight. The remaining herds
had become mere scattered bands, harried and driven
hither and thither by the hunters, who now swarmed
almost as thickly as the buffaloes. A cordon
of camps was established along the Arkansas River,
the South Platte, the Republican, and the few other
streams that contained water, and when the thirsty
animals came to drink they were attacked and driven
away, and with the most fiendish persistency kept from
slaking their thirst, so that they would again be
compelled to seek the river and come within range
of the deadly breech-loaders. Colonel Dodge declares
that in places favorable to such warfare, as the south
bank of the Platte, a herd of buffalo has, by shooting
at it by day and by lighting fires and firing guns
at night, been kept from water until it has been entirely
destroyed. In the autumn of 1873, when Mr. William
Blackmore traveled for some 30 or 40 miles along the
north bank of the Arkansas River to the east of Port
Dodge, “there was a continuous line of putrescent
carcasses, so that the air was rendered pestilential
and offensive to the last degree. The hunters
had formed a line of camps along the banks of the
river, and had shot down the buffalo, night and morning,
as they came to drink. In order to give an idea
of the number of these carcasses, it is only necessary
to mention that I counted sixty-seven on one spot
not covering 4 acres.”
  
White hunters were not allowed to hunt in the Indian
Territory, but the southern boundary of the State
of Kansas was picketed by them, and a herd no sooner
crossed the line going north than it was destroyed.
Every water-hole was guarded by a camp of hunters,
and whenever a thirsty herd approached, it was promptly
met by rifle-bullets.
  
During this entire period the slaughter of buffaloes
was universal. The man who desired buffalo meat
for food almost invariably killed five times as many
animals as he could utilize, and after cutting from
each victim its very choicest parts—­the
*tongue alone*, possibly, or perhaps the hump
and hind quarters, one or the other, or both—­fully
four-fifths of the really edible portion of the carcass
would be left to the wolves. It was no uncommon
thing for a man to bring in two barrels of salted

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buffalo tongues, without another pound of meat or a
solitary robe. The tongues were purchased at
25 cents each and sold in the markets farther east
at 50 cents. In those days of criminal wastefulness
it was a very common thing for buffaloes to be slaughtered
for their tongues alone. Mr. George Catlin[65]
relates that a few days previous to his arrival at
the mouth of the Tetón River (Dakota), in 1832, “an
immense herd of buffaloes had showed themselves on
the opposite side of the river,” whereupon a
party of five or six hundred Sioux Indians on horseback
forded the river, attacked the herd, recrossed the
river about sunset, and came into the fort with fourteen
hundred fresh buffalo tongues, which were thrown down
in a mass, and for which they required only a few
gallons of whisky, which was soon consumed in “a
little harmless carouse.” Mr. Catlin states
that from all that he could learn not a skin or a
pound of meat, other than the tongues, was saved after
this awful slaughter.
  
[Note 65: North American Indians, I, 256.]
  
Judging from all accounts, it is making a safe estimate
to say that probably no fewer than fifty thousand
buffaloes have been killed for their tongues alone,
and the most of these are undoubtedly chargeable against
white men, who ought to have known better.
  
A great deal has been said about the slaughter of
buffaloes by foreign sportsmen, particularly Englishmen;
but I must say that, from all that can be ascertained
on this point, this element of destruction has been
greatly exaggerated and overestimated. It is true
that every English sportsman who visited this country
in the days of the buffalo always resolved to have,
and did have, “a buffalo hunt,” and usually
under the auspices of United States Army officers.
Undoubtedly these parties did kill hundreds of buffaloes,
but it is very doubtful whether the aggregate of the
number slain by foreign sportsmen would run up higher
than ten thousand. Indeed, for myself, I am well
convinced that there are many old ex-still-hunters
yet living, each of whom is accountable for a greater
number of victims than all buffaloes killed by foreign
sportsmen would make added together. The professional
butchers were very much given to crying out against
“them English lords,” and holding up their
hands in holy horror at buffaloes killed by them for
their heads, instead of for hides to sell at a dollar
apiece; but it is due the American public to say that
all this outcry was received at its true value and
deceived very few. By those in possession of the
facts it was recognized as “a blind,”
to divert public opinion from the real culprits.
  
Nevertheless it is very true that many men who were
properly classed as sportsmen, in contradistinction
from the pot-hunters, did engage in useless and inexcusable
slaughter to an extent that was highly reprehensible,
to say the least. A sportsman is not supposed
to kill game wantonly, when it can be of no possible
use to himself or any one else, but a great many do
it for all that. Indeed, the sportsman who kills
sparingly and conscientiously is rather the exception
than the rule. Colonel Dodge thus refers to the
work of some foreign sportsmen:

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“In the fall of that year [1872] three English
gentlemen went out with me for a short hunt, and in
their excitement bagged more buffalo than would have
supplied a brigade.” As a general thing,
however, the professional sportsmen who went out to
have a buffalo hunt for the excitement of the chase
and the trophies it yielded, nearly always found the
bison so easy a victim, and one whose capture brought
so little glory to the hunter, that the chase was
voted very disappointing, and soon abandoned in favor
of nobler game. In those days there was no more
to boast of in killing a buffalo than in the assassination
of a Texas steer.
  
It was, then, the hide-hunters, white and red, but
especially white, who wiped out the great southern
herd in four short years. The prices received
for hides varied considerably, according to circumstances,
but for the green or undressed article it usually
ranged from 50 cents for the skins of calves to $1.25
for those of adult animals in good condition.
Such prices seem ridiculously small, but when it is
remembered that, when buffaloes were plentiful it was
no uncommon thing for a hunter to kill from forty
to sixty head in a day, it will readily be seen that
the *chances* of making very handsome profits
were sufficient to tempt hunters to make extraordinary
exertions. Moreover, even when the buffaloes
were nearly gone, the country was overrun with men
who had absolutely nothing else to look to as a means
of livelihood, and so, no matter whether the profits
were great or small, so long as enough buffaloes remained
to make it possible to get a living by their pursuit,
they were hunted down with the most determined persistency
and pertinacity.
  
6. *Statistics of the slaughter.*—­The
most careful and reliable estimate ever made of results
of the slaughter of the southern buffalo herd is that
of Col. Richard Irving Dodge, and it is the only
one I know of which furnishes a good index of the
former size of that herd. Inasmuch as this calculation
was based on actual statistics, supplemented by personal
observations and inquiries made in that region during
the great slaughter, I can do no better than to quote
Colonel Dodge almost in full.[66]
  
[Note 66: Plains of the Great West, pp. 139-144.]
  
The Atchison, Topeka and Santa Fé Railroad furnished
the following statistics of the buffalo product carried
by it during the years 1872, 1873, and 1874:
+----------------------------------------------------+
| *Buffalo product.* |
+----------------------------------------------------+
| | No. of skins | | |
|Year. | carried. | Meat carried. | Bone carried.|
+----------------------------------------------------+
| | | Pounds. | Pounds. |
|1872 | 165,721 | ... | 1,135,300 |
|1873 | 251,443 | 1,617,600 | 2,743,100 |
|1874 | 42,289 | 632,800 | 6,914,950 |  
  
The officials of the Kansas Pacific and Union Pacific
railroads either could not or would not furnish any
statistics of the amount of the buffalo product carried
by their lines during this period, and it became necessary
to proceed without the actual figures in both cases.
Inasmuch as the Kansas Pacific road cuts through a
portion of the buffalo country which was in every
respect as thickly inhabited by those animals as the
region traversed by the Atchison, Topeka and Santa
Fé, it seemed absolutely certain that the former road
hauled out fully as many hides as the latter, if not
more, and its quota is so set down. The Union
Pacific line handled a much smaller number of buffalo
hides than either of its southern rivals, but Colonel
Dodge believes that this, “with the smaller
roads which touch the buffalo region, taken together,
carried about as much as either of the two principal
buffalo roads.”
  
Colonel Dodge considers it reasonably certain that
the statistics furnished by the Atchison, Topeka and
Santa Fé road represent only one-third of the entire
buffalo product, and there certainly appears to be
good ground for this belief. It is therefore in
order to base further calculations upon these figures.
  
According to evidence gathered on the spot by Colonel
Dodge during the period of the great slaughter, one
hide sent to market in 1872 represented three dead
buffaloes, in 1873 two, and in 1874 one hundred skins
delivered represented one hundred and twenty-five dead
animals. The total slaughter by white men was
therefore about as below:
+------------------------------------------------------  
---------+
|Year.|Hides |Hides |Total |Total |Total |
| |shipped |shipped |number of |number |of buffaloes|
| |by A., T.|by other |buffaloes |killed and|slaughtered |
| |and S. F.|roads, |utilized. |wasted. |by whites. |
| |railway. |same | | | |
| | |period. | | | |
| | |(estimated)| | | |
+-----+---------+-----------+-----------+----------+--------  
----+
|1872 | 165,721 | 331,442 | 497,163 | 994,326| 1,491,489 |
|1873 | 251,443 | 502,886 | 754,329 | 754,329| 1,508,658 |
|1874 | 42,289 | 84,578 | 126,867 | 31,716| 158,583 |
|Total| 459,453 | 918,906 |1,378,359 | 1,780,481| 3,158,730 |
+-----------------------------------------------------------  
----+
  
During all this time the Indians of all tribes within
striking distance of the herds killed an immense number
of buffaloes every year. In the summer they killed
for the hairless hides to use for lodges and for leather,
and in the autumn they slaughtered for robes and meat,
but particularly robes, which were all they could
offer the white trader in exchange for his goods.
They were too lazy and shiftless to cure much buffalo
meat, and besides it was not necessary, for the Government
fed them. In regard to the number of buffaloes
of the southern herd killed by the Indians, Colonel
Dodge arrives at an estimate, as follows:

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“It is much more difficult to estimate the number
of dead buffalo represented by the Indian-tanned skins
or robes sent to market. This number varies with
the different tribes, and their greater or less contact
with the whites. Thus, the Cheyennes, Arapahoes,
and Kiowas of the southern plains, having less contact
with whites, use skins for their lodges, clothing,
bedding, par-fléches, saddles, lariats, for almost
everything. The number of robes sent to market
represent only what we may call the foreign exchange
of these tribes, and is really not more than one-tenth
of the skins taken. To be well within bounds I
will assume that one robe sent to market by these
Indians represents six dead buffaloes.
  
“Those bands of Sioux who live at the agencies,
and whose peltries are taken to market by the Union
Pacific Railroad, live in lodges of cotton cloth furnished
by the Indian Bureau. They use much civilized
clothing, bedding, boxes, ropes, *etc*. For
these luxuries they must pay in robes, and as the
buffalo range is far from wide, and their yearly ‘crop’
small, more than half of it goes to market.”
  
Leaving out of the account at this point all consideration
of the killing done north of the Union Pacific Railroad,
Colonel Dodge’s figures are as follows:
 *Southern buffaloes slaughtered by southern Indians.*
+------------------------------------------------------  
-----------+
| |Sent to |No. of dead |
| Indians. |market. |buffaloes |
| | |represented.|
+-----------------------------------------+----------+------  
------+
| | | |
|Kiowas, Comanches, Cheyennes, Arapahoes, | | |
|and other Indians whose robes go over the| | |
|Atchison, Topeka and Santa Fé Railroad | 19,000 | 114,000 |
|Sioux at agencies, Union Pacific Railroad| 10,000 | 16,000 |
| +----------+------------+
|Total slaughtered per annum | 29,000 | 130,000 |
|Total for the three years 1872-1874 | ... | 390,000 |
+-----------------------------------------------------------  
------+
  
Reference has already been made to the fact that during
those years an immense number of buffaloes were killed
by the farmers of eastern Kansas and Nebraska for
their meat. Mr. William Mitchell, of Wabaunsee,
Kansas, stated to the writer that “in those
days, when buffaloes were plentiful in western Kansas,
pretty much everybody made a trip West in the fall
and brought back a load of buffalo meat. Everybody
had it in abundance as long as buffaloes remained
in any considerable number. Very few skins were
saved; in fact, hardly any, for the reason that nobody
knew how to tan them, and they always spoiled.
At first a great many farmers tried to dress the green
hides that they brought back, but they could not succeed,
and finally gave up trying. Of course, a great
deal of the meat killed was wasted, for only the best
parts were brought back.”

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The Wichita (Kansas) *World* of February 9, 1889,
contains the following reference:
  
“In 1871 and 1872 the buffalo ranged within
10 miles of Wichita, and could be counted by the thousands.
The town, then in its infancy, was the headquarters
for a vast number of buffalo-hunters, who plied their
occupation vigorously during the winter. The buffalo
were killed principally for their hides, and daily
wagon trains arrived in town loaded with them.
Meat was very cheap in those days; fine, tender buffalo
steak selling from 1 to 2 cents per pound. \* \* \* The
business was quite profitable for a time, but a sudden
drop in the price of hides brought them down as low
as 25 and 50 cents each. \* \* \* It was a very common
thing in those days for people living in Wichita to
start out in the morning and return by evening with
a wagon load of buffalo meat.”
  
Unquestionably a great many thousand buffaloes were
killed annually by the settlers of Kansas, Nebraska,
Texas, New Mexico, and Colorado, and the mountain
Indians living west of the great range. The number
so slain can only be guessed at, for there is absolutely
no data on which to found an estimate. Judging
merely from the number of people within reach of the
range, it may safely be estimated that the total number
of buffaloes slaughtered annually to satisfy the wants
of this heterogeneous element could not have been
less than fifty thousand, and probably was a much
higher number. This, for the three years, would
make one hundred and fifty thousand, and the grand
total would therefore be about as follows:
+------------------------------------------------------  
+
| *The slaughter of the southern herd.* |
+------------------------------------------------------+
|Killed by “professional” white hunters in | |
| 1872, 1873, and 1874 | 3,158,730 |
|Killed by Indians, same period | 390,000 |
|Killed by settlers and mountain Indians | 150,000 |
| | --------- |
| Total slaughter in three years | 3,098,730 |
+------------------------------------------------------+  
e>
  
These figures seem incredible, but unfortunately there
is not the slightest reason for believing they are
too high. There are many men now living who declare
that during the great slaughter they each killed from
twenty-five hundred to three thousand buffaloes every
year. With thousands of hunters on the range,
and such possibilities of slaughter before each, it
is, after all, no wonder that an average of nearly
a million and a quarter of buffaloes fell each year
during that bloody period.

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By the close of the hunting season of 1875 the great
southern herd had ceased to exist. As a body,
it had been utterly annihilated. The main body
of the survivors, numbering about ten thousand head,
fled southwest, and dispersed through that great tract
of wild, desolate, and inhospitable country stretching
southward from the Cimarron country across the “Public
Land Strip,” the Pan-handle of Texas, and the
Llano Estacado, or Staked Plain, to the Pecos River.
A few small bands of stragglers maintained a precarious
existence for a few years longer on the headwaters
of the Republican River and in southwestern Nebraska,
near Ogalalla, where calves were caught alive as late
as 1885. Wild buffaloes were seen in southwestern
Kansas for the last time in 1886, and the two or three
score of individuals still living in the Canadian
River country of the Texas Pan-handle are the last
wild survivors of the great Southern herd.
  
The main body of the fugitives which survived the
great slaughter of 1871-’74 continued to attract
hunters who were very “hard up,” who pursued
them, often at the risk of their own lives, even into
the terrible Llano Estacado. In Montana in 1886
I met on a cattle ranch an ex-buffalo-hunter from
Texas, named Harry Andrews, who from 1874 to 1876
continued in pursuit of the scattered remnants of the
great southern herd through the Pan-handle of Texas
and on into the Staked Plain itself. By that
time the market had become completely overstocked with
robes, and the prices received by Andrews and other
hunters was only 65 cents each for cow robes and $1.15
each for bull robes, delivered on the range, the purchaser
providing for their transportation to the railway.
But even at those prices, which were so low as to make
buffalo killing seem like downright murder, Mr. Andrews
assured me that he “made big money.”
On one occasion, when he “got a stand”
on a large bunch of buffalo, he fired one hundred
and fifteen shots from one spot, and killed sixty-three
buffaloes in about an hour.
  
In 1880 buffalo hunting as a business ceased forever
in the Southwest, and so far as can be ascertained,
but one successful hunt for robes has been made in
that region since that time. That occurred in
the fall and winter of 1887, about 100 miles north
of Tascosa, Texas, when two parties, one of which
was under the leadership of Lee Howard, attacked the
only band of buffaloes left alive in the Southwest,
and which at that time numbered about two hundred
head. The two parties killed fifty-two buffaloes,
of which ten skins were preserved entire for mounting.
Of the remaining forty-two, the heads were cut off
and preserved for mounting and the skins were prepared
as robes. The mountable skins were finally sold
at the following prices: Young cows, $50 to $60;
adult cows, $75 to $100; adult bull, $150. The
unmounted heads sold as follows: Young bulls,
$25 to $30; adult bulls, $50; young cows, $10 to $12;
adult cows, $15 to $25. A few of the choicest
robes sold at $20 each, and the remainder, a lot of
twenty eight, of prime quality and in excellent condition,
were purchased by the Hudson’s Bay Fur Company
for $350.

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Such was the end of the great southern herd.
In 1871 it contained certainly no fewer than three
million buffaloes, and by the beginning of 1875 its
existence as a herd had utterly ceased, and nothing
but scattered, fugitive bands remained.
  
7. *The Destruction of the Northern Herd.*—­Until
the building of the Northern Pacific Railway there
were but two noteworthy outlets for the buffalo robes
that were taken annually in the Northwestern Territories
of the United States. The principal one was the
Missouri River, and the Yellowstone River was the
other. Down these streams the hides were transported
by steam-boats to the nearest railway shipping point.
For fifty years prior to the building of the Northern
Pacific Railway in 1880-’82, the number of robes
marketed every year by way of these streams was estimated
variously at from fifty to one hundred thousand.
A great number of hides taken in the British Possessions
fell into the hands of the Hudson’s Bay Company,
and found a market in Canada.
  
In May, 1881, the Sioux City (Iowa) *Journal*
contained the following information in regard to the
buffalo robe “crop” of the previous hunting
season—­the winter of 1880-’81:
  
“It is estimated by competent authorities that
one hundred thousand buffalo hides will be shipped
out of the Yellowstone country this season. Two
firms alone are negotiating for the transportation
of twenty-five thousand hides each. \* \* \* Most of
our citizens saw the big load of buffalo hides that
the *C. K. Peck* brought down last season,
a load that hid everything about the boat below the
roof of the hurricane deck. There were ten thousand
hides in that load, and they were all brought out
of the Yellowstone on one trip and transferred to the
*C. K. Peck*. How such a load could
have been piled on the little *Terry* not even
the men on the boat appear to know. It hid every
part of the boat, barring only the pilot-house and
smoke-stacks. But such a load will not be attempted
again. For such boats as ply the Yellowstone there
are at least fifteen full loads of buffalo hides and
other pelts. Reckoning one thousand hides to
three car loads, and adding to this fifty cars for
the other pelts, it will take at least three hundred
and fifty box-cars to carry this stupendous bulk of
peltry East to market. These figures are not
guesses, but estimates made by men whose business it
is to know about the amount of hides and furs awaiting
shipment.
  
“Nothing like it has ever been known in the
history of the fur trade. Last season the output
of buffalo hides was above the average, and last year
only about thirty thousand hides came out of the Yellowstone
country, or less than a third of what is there now
awaiting shipment The past severe winter caused the
buffalo to bunch themselves in a few valleys where
there was pasturage, and there the slaughter went on
all winter. There was no sport about it, simply
shooting down the famine-tamed animals as cattle might
be shot down in a barn-yard. To the credit of
the Indians it can be said that they killed no more
than they could save the meat from. The greater
part of the slaughter was done by white hunters, or
butchers rather, who followed the business of killing
and skinning buffalo by the mouth, leaving the carcasses
to rot.”

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At the time of the great division made by the Union
Pacific Railway the northern body of buffalo extended
from the valley of the Platte River northward to the
southern shore of Great Slave Lake, eastward almost
to Minnesota, and westward to an elevation of 8,000
feet in the Rocky Mountains. The herds were most
numerous along the central portion of this region
(see map), and from the Platte Valley to Great Slave
Lake the range was continuous. The buffalo population
of the southern half of this great range was, according
to all accounts, nearly three times as great as that
of the northern half. At that time, or, let us
say, 1870, there were about four million buffaloes
south of the Platte River, and probably about one
million and a half north of it. I am aware that
the estimate of the number of buffaloes in the great
northern herd is usually much higher than this, but
I can see no good grounds for making it so. To
my mind, the evidence is conclusive that, although
the northern herd ranged over such an immense area,
it was numerically less than half the size of the
overwhelming multitude which actually crowded the
southern range, and at times so completely consumed
the herbage of the plains that detachments of the
United States Army found it difficult to find sufficient
grass for their mules and horses.[67]
  
[Note 67: As an instance of this, see *Forest
and Stream*, vol. II, p. 184: “Horace
Jones, the interpreter here [Fort Sill], says that
on his first trip along the line of the one hundredth
meridian, in 1859, accompanying Major Thomas—­since
our noble old general—­they passed continuous
herds for over 60 miles, which left so little grass
behind them that Major Thomas was seriously troubled
about his horses.”]
  
The various influences which ultimately led to the
complete blotting out of the great northern herd were
exerted about as follows:
  
In the British Possessions, where the country was
immense and game of all kinds except buffalo very
scarce indeed; where, in the language of Professor
Kenaston, the explorer, “there was a great deal
of country around every wild animal,” the buffalo
constituted the main dependence of the Indians, who
would not cultivate the soil at all, and of the half-breeds,
who would not so long as they could find buffalo.
Under such circumstances the buffaloes of the British
Possessions were hunted much more vigorously and persistently
than those of the United States, where there was such
an abundant supply of deer, elk, antelope, and other
game for the Indians to feed upon, and a paternal government
to support them with annuities besides. Quite
contrary to the prevailing idea of the people of the
United States, *viz*., that there were great herds
of buffaloes in existence in the Saskatchewan country
long after ours had all been destroyed, the herds
of British America had been almost totally exterminated
by the time the final slaughter of our northern herd
was inaugurated by the opening of the Northern Pacific

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Railway in 1880. The Canadian Pacific Railway
played no part whatever in the extermination of the
bison in the British Possessions, for it had already
taken place. The half-breeds of Manitoba, the
Plains Crees of Qu’Appelle, and the Blackfeet
of the South Saskatchewan country swept bare a great
belt of country stretching east and west between the
Rocky Mountains and Manitoba. The Canadian Pacific
Railway found only bleaching bones in the country
through which it passed. The buffalo had disappeared
from that entire region before 1879 and left the Blackfeet
Indians on the verge of starvation. A few thousand
buffaloes still remained in the country around the
headwaters of the Battle River, between the North
and South Saskatchewan, but they were surrounded and
attacked from all sides, and their numbers diminished
very rapidly until all were killed.
  
The latest information I have been able to obtain
in regard to the disappearance of this northern band
has been kindly furnished by Prof. C. A. Kenaston,
who in 1881, and also in 1883, made a thorough exploration
of the country between Winnipeg and Fort Edmonton for
the Canadian Pacific Railway Company. His four
routes between the two points named covered a vast
scope of country, several hundred miles in width.
In 1881, at Moose Jaw, 75 miles southeast of The Elbow
of the South Saskatchewan, he saw a party of Cree
Indians, who had just arrived from the northwest with
several carts laden with fresh buffalo meat. At
Fort Saskatchewan, on the North Saskatchewan River,
just above Edmonton, he saw a party of English sportsmen
who had recently been hunting on the Battle and Red
Deer Rivers, between Edmonton and Fort Kalgary, where
they had found buffaloes, and killed as many as they
cared to slaughter. In one afternoon they killed
fourteen, and could have killed more had they been
more blood-thirsty. In 1883 Professor Kenaston
found the fresh trail of a band of twenty-five or
thirty buffaloes at The Elbow of the South Saskatchewan.
Excepting in the above instances he saw no further
traces of buffalo, nor did he hear of the existence
of any in all the country he explored. In 1881
he saw many Cree Indians at Fort Qu’Appelle
in a starving condition, and there was no pemmican
or buffalo meat at the fort. In 1883, however,
a little pemmican found its way to Winnipeg, where
it sold at 15 cents per pound; an exceedingly high
price. It had been made that year, evidently
in the mouth of April, as he purchased it in May for
his journey.
  
The first really alarming impression made on our northern
herd was by the Sioux Indians, who very speedily exterminated
that portion of it which had previously covered the
country lying between the North Platte and a line
drawn from the center of Wyoming to the center of Dakota.
All along the Missouri River from Bismarck to Fort
Benton, and along the Yellowstone to the head of navigation,
the slaughter went bravely on. All the Indian
tribes of that vast region—­Sioux, Cheyennes,
Crows, Blackfeet, Bloods, Piegans, Assinniboines,
Gros Ventres, and Shoshones—­found their
most profitable business and greatest pleasure (next
to scalping white settlers) in hunting the buffalo.
It took from eight to twelve buffalo hides to make
a covering for one ordinary teepee, and sometimes
a single teepee of extra size required from twenty
to twenty-five hides.

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The Indians of our northwestern Territories marketed
about seventy-five thousand buffalo robes every year
so long as the northern herd was large enough to afford
the supply. If we allow that for every skin sold
to white traders four others were used in supplying
their own wants, which must be considered a very moderate
estimate, the total number of buffaloes slaughtered
annually by those tribes must have been about three
hundred and seventy-five thousand.
  
The end which so many observers had for years been
predicting really began (with the northern herd) in
1876, two years after the great annihilation which
had taken place in the South, although it was not
until four years later that the slaughter became universal
over the entire range. It is very clearly indicated
in the figures given in a letter from Messrs. I. G.
Baker & Co., of Fort Benton, Montana, to the writer,
dated October 6, 1887, which reads as follows:
  
“There were sent East from the year 1876 from
this point about seventy-five thousand buffalo robes.
In 1880 it had fallen to about twenty thousand, in
1883 not more than five thousand, and in 1884 none
whatever. We are sorry we can not give you a better
record, but the collection of hides which exterminated
the buffalo was from the Yellowstone country on the
Northern Pacific, instead of northern Montana.”
  
The beginning of the final slaughter of our northern
herd may be dated about 1880, by which time the annual
robe crop of the Indians had diminished three-fourths,
and when summer killing for hairless hides began on
a large scale. The range of this herd was surrounded
on three sides by tribes of Indians, armed with breech-loading
rifles and abundantly supplied with fixed ammunition.
Up to the year 1880 the Indians of the tribes previously
mentioned killed probably three times as many buffaloes
as did the white hunters, and had there not been a
white hunter in the whole Northwest the buffalo would
have been exterminated there just as surely, though
not so quickly by perhaps ten years, as actually occurred.
Along the north, from the Missouri River to the British
line, and from the reservation in northwestern Dakota
to the main divide of the Rocky Mountains, a distance
of 550 miles as the crow flies, the country was one
continuous Indian reservation, inhabited by eight
tribes, who slaughtered buffalo in season and out of
season, in winter for robes and in summer for hides
and meat to dry. In the Southeast was the great
body of Sioux, and on the Southwest the Crows and
Northern Cheyennes, all engaged in the same relentless
warfare. It would have required a body of armed
men larger than the whole United States Army to have
withstood this continuous hostile pressure without
ultimate annihilation.

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Let it be remembered, therefore, that the American
Indian is as much responsible for the extermination
of our northern herd of bison as the American citizen.
I have yet to learn of an instance wherein an Indian
refrained from excessive slaughter of game through
motives of economy, or care for the future, or prejudice
against wastefulness. From all accounts the quantity
of game killed by an Indian has always been limited
by two conditions only—­lack of energy to
kill more, or lack of more game to be killed.
White men delight in the chase, and kill for the “sport”
it yields, regardless of the effort involved.
Indeed, to a genuine sportsman, nothing in hunting
is “sport” which is not obtained at the
cost of great labor. An Indian does not view the
matter in that light, and when he has killed enough
to supply his wants, he stops, because he sees no
reason why he should exert himself any further.
This has given rise to the statement, so often repeated,
that the Indian killed only enough buffaloes to supply
his wants. If an Indian ever attempted, or even
showed any inclination, to husband the resources of
nature in any way, and restrain wastefulness on *the
part of Indians*, it would be gratifying to know
of it.
  
The building of the Northern Pacific Railway across
Dakota and Montana hastened the end that was fast
approaching; but it was only an incident in the annihilation
of the northern herd. Without it the final result
would have been just the same, but the end would probably
not have been reached until about 1888.
  
The Northern Pacific Railway reached Bismarck, Dakota,
on the Missouri River, in the year 1876, and from
that date onward received for transportation eastward
all the buffalo robes and hides that came down the
two rivers, Missouri and Yellowstone.
  
Unfortunately the Northern Pacific Railway Company
kept no separate account of its buffalo product business,
and is unable to furnish a statement of the number
of hides and robes it handled. It is therefore
impossible to even make an estimate of the total number
of buffaloes killed on the northern range during the
six years which ended with the annihilation of that
herd.
  
In regard to the business done by the Northern Pacific
Railway, and the precise points from whence the bulk
of the robes were shipped, the following letter from
Mr. J. M. Hannaford, traffic manager of the Northern
Pacific Railroad, under date of September 3, 1887,
is of interest.
  
“Your communication, addressed to President
Harris, has been referred to me for the information
desired.
  
“I regret that our accounts are not so kept
as to enable me to furnish you accurate data; but
I have been able to obtain the following general information,
which may prove of some value to you:

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“From the years 1876 and 1880 our line did not
extend beyond Bismarck, which was the extreme easterly
shipping point for buffalo robes and hides, they being
brought down the Missouri River from the north for
shipment from that point. In the years 1876, 1877,
1878, and 1879 there were handled at that point yearly
from three to four thousand bales of robes, about
one-half the bales containing ten robes and the other
half twelve robes each. During these years practically
no hides were shipped. In 1880 the shipment of
hides, dry and untanned, commenced,[68] and in 1881
and 1882 our line was extended west, and the shipping
points increased, reaching as far west as Terry and
Sully Springs, in Montana. During these years,
1880, 1881, and 1882, which practically finished the
shipments of hides and robes, it is impossible for
me to give you any just idea of the number shipped.
The only figures obtainable are those of 1881, when
over seventy-five thousand dry and untanned buffalo
hides came down the river for shipment from Bismarck.
Some robes were also shipped from this point that
year, and a considerable number of robes and hides
were shipped from several other shipping points.
  
[Note 68: It is to be noted that hairless hides,
*taken from buffaloes killed in summer*, are
what the writer refers to. It was not until 1881,
when the end was very near, that hunting buffalo in
summer as well as winter became a wholesale business.
What hunting can be more disgraceful than the slaughter
of females and young *in summer*, when skins are
almost worthless.]
  
“The number of pounds of buffalo meat shipped
over our line has never cut any figure, the bulk of
the meat having been left on the prairie, as not being
of sufficient value to pay the cost of transportation.
  
“The names of the extreme eastern and western
stations from which shipments were made are as follows:
In 1880, Bismarck was the only shipping point.
In 1881, Glendive, Bismarck, and Beaver Creek.
In 1882, Terry and Sully Springs, Montana, were the
chief shipping points, and in the order named, so
far as numbers and amount of shipments are concerned.
Bismarck on the east and Forsyth on the west were the
two extremities.
  
“Up to the year 1880, so long as buffalo were
killed only for robes, the bands did not decrease
very materially; but beginning with that year, when
they were killed for their hides as well, a most indiscriminate
slaughter commenced, and from that time on they disappeared
very rapidly. Up to the year 1881 there were
two large bands, one south of the Yellowstone and
the other north of that river. In the year mentioned
those south of the river were driven north and never
returned, having joined the northern band, and become
practically extinguished.
  
“Since 1882 there have, of course, been occasional
shipments both of hides and robes, but in such small
quantities and so seldom that they cut practically
no figure, the bulk of them coming probably from north
Missouri points down the river to Bismarck.”

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In 1880 the northern buffalo range embraced the following
streams; The Missouri and all its tributaries, from
Port Shaw, Montana, to Fort Bennett, Dakota, and the
Yellowstone and all its tributaries. Of this
region, Miles City, Montana, was the geographical center.
The grass was good over the whole of it, and the various
divisions of the great herd were continually shifting
from one locality to another, often making journeys
several hundred miles at a time. Over the whole
of this vast area their bleaching bones lie scattered
(where they have not as yet been gathered up for sale)
from the Upper Marias and Milk Rivers, near the British
boundary, to the Platte, and from the James River,
in central Dakota, to an elevation of 8,000 feet in
the Rocky Mountains. Indeed, as late as October,
1887, I gathered up on the open common, within half
a mile of the Northern Pacific Railway depot at the
city of Helena, the skull, horns, and numerous odd
bones of a large bull buffalo which had been killed
there.
  
[Illustration: WHERE THE MILLIONS HAVE GONE.
From a painting by J. H. Moser in the National Museum.]
  
Over many portions of the northern range the traveler
may even now ride for days together without once being
out of sight of buffalo carcasses, or bones.
Such was the case in 1886 in the country lying between
the Missouri and the Yellowstone, northwest of Miles
City. Go wherever we might, on divides, into
bad lands, creek bottoms, or on the highest plateaus,
we always found the inevitable and omnipresent grim
and ghastly skeleton, with hairy head, dried-up and
shriveled nostrils, half-skinned legs stretched helplessly
upon the gray turf, and the bones of the body bleached
white as chalk.
  
The year 1881 witnessed the same kind of a stampede
for the northern buffalo range that occurred just
ten years previously in the south. At that time
robes were worth from two to three times as much as
they ever had been in the south, the market was very
active, and the successful hunter was sure to reap
a rich reward as long as the buffaloes lasted.
At that time the hunters and hide-buyers estimated
that there were five hundred thousand buffaloes within
a radius of 150 miles of Miles City, and that there
were still in the entire northern herd not far from
one million head. The subsequent slaughter proved
that these estimates were probably not far from the
truth. In that year Fort Custer was so nearly
overwhelmed by a passing herd that a detachment of
soldiers was ordered out to turn the herd away from
the post. In 1882 an immense herd appeared on
the high, level plateau on the north side of the Yellowstone
which overlooks Miles City and Fort Keogh in the valley
below. A squad of soldiers from the Fifth Infantry
was sent up on the bluff, and in less than an hour
had killed enough buffaloes to load six four-mule
teams with meat. In 1886 there were still about
twenty bleaching skeletons lying in a group on the
edge of this plateau at the point where the road from
the ferry reaches the level, but all the rest had
been gathered up.

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In 1882 there were, so it is estimated by men who
were in the country, no fewer than five thousand white
hunters and skinners on the northern range. Lieut.
J. M. T. Partello declares that “a cordon of
camps, from the Upper Missouri, where it bends to
the west, stretched toward the setting sun as far
as the dividing line of Idaho, completely blocking
in the great ranges of the Milk River, the Musselshell,
Yellowstone, and the Marias, and rendering it impossible
for scarcely a single bison to escape through the
chain of sentinel camps to the Canadian northwest.
Hunters of Nebraska, Wyoming, and Colorado drove the
poor hunted animals north, directly into the muzzles
of the thousands of repeaters ready to receive them.
\* \* \* Only a few short years ago, as late as 1883,
a herd of about seventy-five thousand crossed the
Yellowstone River a few miles south of here [Fort
Keogh], scores of Indians, pot-hunters, and white
butchers on their heels, bound for the Canadian dominions,
where they hoped to find a haven of safety. Alas!
not five thousand of that mighty mass ever lived to
reach the British border line.”
  
It is difficult to say (at least to the satisfaction
of old hunters) which were the most famous hunting
grounds on the northern range. Lieutenant Partello
states that when he hunted in the great triangle bounded
by the three rivers, Missouri, Musselshell, and Yellowstone,
it contained, to the best of his knowledge and belief,
two hundred and fifty thousand buffaloes. Unquestionably
that region yielded an immense number of buffalo robes,
and since the slaughter *thousands of tons* of
bones have been gathered up there. Another favorite
locality was the country lying between the Powder
River and the Little Missouri, particularly the valleys
of Beaver and O’Fallon Creeks. Thither went
scores of “outfits” and hundreds of hunters
and skinners from the Northern Pacific Railway towns
from Miles City to Glendive. The hunters from
the towns between Glendive and Bismarck mostly went
south to Cedar Creek and the Grand and Moreau Rivers.
But this territory was also the hunting ground of
the Sioux Indians from the great reservation farther
south.
  
Thousands upon thousands of buffaloes were killed
on the Milk and Marias Rivers, in the Judith Basin,
and in northern Wyoming.
  
The method of slaughter has already been fully described
under the head of “the still-hunt,” and
need not be recapitulated. It is some gratification
to know that the shocking and criminal wastefulness
which was so marked a feature of the southern butchery
was almost wholly unknown in the north. Robes
were worth from $1.50 to $3.50, according to size
and quality, and were removed and preserved with great
care. Every one hundred robes marketed represented
not more than one hundred and ten dead buffaloes,
and even this small percentage of loss was due to the
escape of wounded animals which afterward died and
were devoured by the wolves. After the skin was
taken off the hunter or skinner stretched it carefully
upon the ground, inside uppermost, cut his initials
in the adherent subcutaneous muscle, and left it until
the season for hauling in the robes, which was always
done in the early spring, immediately following the
hunt.

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As was the case in the south, it was the ability of
a single hunter to destroy an entire bunch of buffalo
in a single day that completely annihilated the remaining
thousands of the northern herd before the people of
the United States even learned what was going on.
For example, one hunter of my acquaintance, Vic.
Smith, the most famous hunter in Montana, killed one
hundred and seven buffaloes in one “stand,”
in about one hour’s time, and without shifting
his point of attack. This occurred in the Red
Water country, about 100 miles northeast of Miles City,
in the winter of 1881-’82. During the same
season another hunter, named “Doc.”
Aughl, killed eighty-five buffaloes at one “stand,”
and John Edwards killed seventy-five. The total
number that Smith claims to have killed that season
is “about five thousand.” Where buffaloes
were at all plentiful, every man who called himself
a hunter was expected to kill between one and two
thousand during the hunting season—­from
November to February—­and when the buffaloes
were to be found it was a comparatively easy thing
to do.
  
During the year 1882 the thousands of bison that still
remained alive on the range indicated above, and also
marked out on the accompanying map, were distributed
over that entire area very generally. In February
of that year a Fort Benton correspondent of *Forest
and Stream* wrote as follows: “It is
truly wonderful how many buffalo are still left.
Thousands of Indians and hundreds of white men depend
on them for a living. At present nearly all the
buffalo in Montana are between Milk River and Bear
Paw Mountains. There are only a few small bands
between the Missouri and the Yellowstone.”
There were plenty of buffalo on the Upper Marias River
in October, 1882. In November and December there
were thousands between the Missouri and the Yellowstone
Rivers. South of the Northern Pacific Railway
the range during the hunting season of 1882-’83
was thus defined by a hunter who has since written
out the “Confessions of a Buffalo Butcher”
for *Forest and Stream* (vol. xxiv, p. 489):
“Then [October, 1882] the western limit was
defined in a general way by Powder River, and extending
eastward well toward the Missouri and south to within
60 or 70 miles of the Black Hills. It embraces
the valleys of all tributaries to Powder River from
the east, all of the valleys of Beaver Creek, O’Fallon
Creek, and the Little Missouri and Moreau Rivers, and
both forks of the Cannon Ball for almost half their
length. This immense territory, lying almost
equally in Montana and Dakota, had been occupied during
the winters by many thousands of buffaloes from time
immemorial, and many of the cows remained during the
summer and brought forth their young undisturbed.”
  
The three hunters composing the party whose record
is narrated in the interesting sketch referred to,
went out from Miles City on October 23, 1882, due
east to the bad lands between the Powder River and
O’Fallon Creek, and were on the range all winter.
They found comparatively few buffaloes, and secured
only two hundred and eighty-six robes, which they
sold at an average price of $2.20 each. They saved
and marketed a large quantity of meat, for which they
obtained 3 cents per pound. They found the whole
region in which they hunted fairly infested with Indians
and half-breeds, all hunting buffalo.

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The hunting season which began in October, 1882, and
ended in February, 1883, finished the annihilation
of the great northern herd, and left but a few small
bauds of stragglers, numbering only a very few thousand
individuals all told. A noted event of the season
was the retreat northward across the Yellowstone of
the immense herd mentioned by Lieutenant Partello
as containing seventy-five thousand head; others estimated
the number at fifty thousand; and the event is often
spoken of to-day by frontiersmen who were in that
region at the time. Many think that the whole
great body went north into British territory, and that
there is still a goodly remnant of it in some remote
region between the Peace River and the Saskatchewan,
or somewhere there, which will yet return to the United
States. Nothing could be more illusory than this
belief. In the first place, the herd never reached
the British line, and, if it had, it would have been
promptly annihilated by the hungry Blackfeet and Cree
Indians, who were declared to be in a half-starved
condition, through the disappearance of the buffalo,
as early as 1879.
  
The great herd that “went north” was utterly
extinguished by the white hunters along the Missouri
River and the Indians living north of it. The
only vestige of it that remained was a band of about
two hundred individuals that took refuge in the labyrinth
of ravines and creek bottoms that lie west of the
Musselshell between Flat Willow and Box Elder Creeks,
and another band of about seventy-five which settled
in the bad lands between the head of the Big Dry and
Big Porcupine Creeks, where a few survivors were found
by the writer in 1886.
  
South of the Northern Pacific Railway, a band of about
three hundred settled permanently in and around the
Yellowstone National Park, but in a very short time
every animal outside of the protected limits of the
park was killed, and whenever any of the park buffaloes
strayed beyond the boundary they too were promptly
killed for their heads and hides. At present
the number remaining in the park is believed by Captain
Harris, the superintendent, to be about two hundred;
about one-third of which is due to breeding in the
protected territory.
  
In the southeast the fate of that portion of the herd
is well known. The herd which at the beginning
of the hunting season of 1883 was known to contain
about ten thousand head, and ranged in western Dakota,
about half way between the Black Hills and Bismarck,
between the Moreau and Grand Rivers, was speedily
reduced to about one thousand head. Vic.
Smith, who was “in at the death,” says
there were eleven hundred, others say twelve hundred.
Just at this juncture (October, 1883) Sitting Bull
and his whole band of nearly one thousand braves arrived
from the Standing Sock Agency, and in two days’
time slaughtered the entire herd. Vic. Smith
and a host of white hunters took part in the killing
of this last ten thousand, and he declares that “when
we got through the hunt there was not a hoof left.
That wound up the buffalo in the Far West, only a
stray bull being seen here and there afterwards.”

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Curiously enough, not even the buffalo hunters themselves
were at the time aware of the fact that the end of
the hunting season of 1882-’83 was also the
end of the buffalo, at least as an inhabitant of the
plains and a source of revenue. In the autumn
of 1883 they nearly all outfitted as usual, often
at an expense of many hundreds of dollars, and blithely
sought “the range” that had up to that
time been so prolific in robes. The end was in
nearly every case the same—­total failure
and bankruptcy. It was indeed hard to believe
that not only the millions, but also the thousands,
had actually gone, and forever.
  
I have found it impossible to ascertain definitely
the number of robes and hides shipped from the northern
range during the last years of the slaughter, and
the only reliable estimate I have obtained was made
for me, alter much consideration and reflection, by
Mr. J. N. Davis, of Minneapolis, Minnesota. Mr.
Davis was for many years a buyer of furs, robes, and
hides on a large scale throughout our Northwestern
Territories, and was actively engaged in buying up
buffalo robes as long as there were any to buy.
In reply to a letter asking for statistics, he wrote
me as follows, on September 27, 1887:
  
“It is impossible to give the exact number of
robes and hides shipped out of Dakota and Montana
from 1876 to 1883, or the exact number of buffalo
in the northern herd; but I will give you as correct
an account as any one can. In 1876 it was estimated
that there were half a million buffaloes within a
radius of 150 miles of Miles City. In 1881 the
Northern Pacific Railroad was built as far west as
Glendive and Miles City. At that time the whole
country was a howling wilderness, and Indians and
wild buffalo were too numerous to mention. The
first shipment of buffalo robes, killed by white men,
was made that year, and the stations on the Northern
Pacific Railroad between Miles City and Mandan sent
out about fifty thousand hides and robes. In 1882
the number of hides and robes bought and shipped was
about two hundred thousand, and in 1883 forty thousand.
In 1884 I shipped from Dickinson, Dakota Territory,
the only car load of robes that went East that year,
and it was the last shipment ever made.”
  
For a long time the majority of the ex-hunters cherished
the fond delusion that the great herd had only “gone
north” into the British Possessions, and would
eventually return in great force. Scores of rumors
of the finding of herds floated about, all of which
were eagerly believed at first. But after a year
or two had gone by without the appearance of a single
buffalo, and likewise without any reliable information
of the existence of a herd of any size, even in British
territory, the butchers of the buffalo either hung
up their old Sharps rifles, or sold them for nothing
to the gun-dealers, and sought other means of livelihood.
Some took to gathering up buffalo bones and selling
them by the ton, and others became cowboys.

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**IV.  CONGRESSIONAL LEGISLATION FOR THE PROTECTION OF THE BISON.**

The slaughter of the buffalo down to the very point
of extermination has been so very generally condemned,
and the general Government has been so unsparingly
blamed for allowing such a massacre to take place on
the public domain, it is important that the public
should know all the facts in the case. To the
credit of Congress it must be said that several very
determined efforts were made between the years 1871
and 1876 looking toward the protection of the buffalo.
The failure of all those well-meant efforts was due
to our republican form of Government. Had this
Government been a monarchy the buffalo would have been
protected; but unfortunately in this case (perhaps
the only one on record wherein a king could have accomplished
more than the representatives of the people) the necessary
act of Congress was so hedged in and beset by obstacles
that it never became an accomplished fact. Even
when both houses of Congress succeeded in passing
a suitable act (June 23, 1874) it went to the President
in the last days of the session only to be pigeon-holed,
and die a natural death.
  
The following is a complete history of Congressional
legislation in regard to the protection of the buffalo
from wanton slaughter and ultimate extinction.
The first step taken in behalf of this persecuted
animal was on March 13, 1871, when Mr. McCormick, of
Arizona, introduced a bill (H. R. 157), which
was ordered to be printed. Nothing further was
done with it. It read as follows:
 *Be it enacted, etc.*, That, excepting for the
purpose of using the meat for food or preserving the
akin, it shall be unlawful for any person to kill
the bison, or buffalo, found anywhere upon the public
lands of the United States; and for the violation
of this law the offender shall, upon conviction before
any court of competent jurisdiction, be liable to
a fine of $100 for each animal killed, one-half of
which sum shall, upon its collection, be paid to the
informer.
  
On February 14, 1872, Mr. Cole, of California, introduced
in the Senate the following resolution, which was
considered by unanimous consent and agreed to:
 *Resolved*, That the Committee on Territories
be directed to inquire into the expediency of enacting
a law for the protection of the buffalo, elk, antelope,
and other useful animals running wild in the Territories
of the United States against indiscriminate slaughter
and extermination, and that they report by bill or
otherwise.
  
On February 16, 1872, Mr. Wilson, of Massachusetts,
introduced a bill in the Senate (S. 655) restricting
the killing of the buffalo upon the public lauds;
which was read twice by its title and referred to the
Committee on Territories.
  
On April 5, 1872, Mr. B. C. McCormick, of Arizona,
made a speech in the House of Representatives, while
it was in Committee of the Whole, on the restriction
of the killing of buffalo.

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He mentioned a then recent number of *Harper’s
Weekly*, in which were illustrations of the slaughter
of buffalo, and also read a partly historical extract
in regard to the same. He related how, when he
was once snow-bound upon the Kansas Pacific Railroad,
the buffalo furnished food for himself and fellow-passengers.
Then he read the bill introduced by him March 13,
1871, and also copies of letters furnished him by Henry
Bergh, president of the American Society for the Prevention
of Cruelty to Animals, which were sent to the latter
by General W. B. Hazen, Lieut. Col. A. G.
Brackett, and E. W. Wynkoop. He also read a statement
by General Hazen to the effect that he knew of a man
who killed ninety-nine buffaloes with his own hand
in one day. He also spoke on the subject of cross-breeding
the buffalo with common cattle, and read an extract
in regard to it from the San Francisco *Post*.[69]
  
[Note 69: Congressional Globe (Appendix), second
session Forty-second Congress.]
  
On April 6, 1872, Mr. McCormick asked leave to have
printed in the Globe some remarks he had prepared
regarding restricting the killing of buffalo, which
was granted.[70]
  
[Note 70: Congressional Globe, April 6, 1872,
Forty-second Congress, second session.]
  
On January 5, 1874, Mr. Fort, of Illinois, introduced
a bill (H. R. 921) to prevent the useless slaughter
of buffalo within the Territories of the United States;
which was read and referred to the Committee on the
Territories.[71]
  
[Note 71: Congressional Record, vol. 2, part
1, Forty-third Congress, p. 371.]
  
On March 10, 1874, this bill was reported to the House
from the Committee on the Territories, with a recommendation
that it be passed.[72]
  
[Note 72: Congressional Record, vol. 2, part
3, Forty-third Congress, first session, pp. 2105,
2109.]
  
The first section of the bill provided that it shall
be unlawful for any person, who is not an Indian,
to kill, wound, or in any way destroy any female buffalo
of any age, found at large within the boundaries of
any of the Territories of the United States.
  
The second section provided that it shall be, in like
manner, unlawful for any such person to kill, wound,
or destroy in said Territories any greater number
of male buffaloes than are needed for food by such
person, or than can be used, cured, or preserved for
the food of other persons, or for the market.
It shall in like manner be unlawful for any such person,
or persons, to assist, or be in any manner engaged
or concerned in or about such unlawful killing, wounding,
or destroying of any such buffaloes; that any person
who shall violate the provisions of the act shall,
on conviction, forfeit and pay to the United States
the sum of $100 for each offense (and each buffalo
so unlawfully killed, wounded, or destroyed shall
be and constitute a separate offense), and on a conviction
of a second offense may be committed to prison for
a period not exceeding thirty days; and that all United
States judges, justices, courts, and legal tribunals
in said Territories shall have jurisdiction in cases
of the violation of the law.

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Mr. Cox said he had been told by old hunters that
it was impossible to tell the sex of a running buffalo;
and he also stated that the bill gave preference to
the Indians.
  
Mr. Fort said the object was to prevent early extermination;
that thousands were annually slaughtered for skins
alone, and thousands for their tongues alone; that
perhaps hundreds of thousands are killed every year
in utter wantonness, with no object for such destruction.
He had been told that the sexes could be distinguished
while they were running.[73]
  
[Note 73: I know of no greater affront that could
be offered to the intelligence of a genuine buffalo-hunter
than to accuse him of not knowing enough to tell the
sex of a buffalo “on the run” by its form
alone.—­W. T. H.]
  
This bill does not prohibit any person joining in
a reasonable chase and hunt of the buffalo.
  
Said Mr. Fort, “So far as I am advised, gentlemen
upon this floor representing all the Territories are
favorable to the passage of this bill.”
  
Mr. Cox wanted the clause excepting the Indians from
the operations of the bill stricken out, and stated
that the Secretary of the Interior had already said
to the House that the civilization of the Indian was
Impossible while the buffalo remained on the plains.
  
The Clerk read for Mr. McCormick the following extract
from the *New Mexican*, a paper published in
Santa Fé:
  
The buffalo slaughter, which has been going on the
past few years on the plains, and which increases
every year, is wantonly wicked, and should be stopped
by the most stringent enactments and most vigilant
enforcements of the law. Killing these noble animals
for their hides simply, or to gratify the pleasure
of some Russian duke or English lord, is a species
of vandalism which can not too quickly be checked.
United States surveying parties report that there
are two thousand hunters on the plains killing these
animals for their hides. One party of sixteen
hunters report having killed twenty-eight thousand
buffaloes during the past summer. It seems to
us there is quite as much reason why the Government
should protect the buffaloes as the Indians.
  
Mr. McCormick considered the subject important, and
had not a doubt of the fearful slaughter. He
read the following extract from a letter that he had
received from General Hazen:
  
I know a man who killed with his own hand ninety-nine
buffaloes in one day, without taking a pound of the
meat. The buffalo for food has an intrinsic value
about equal to an average Texas beef, or say $20.
There are probably not less than a million of these
animals on the western plains. If the Government
owned a herd of a million oxen they would at least
take steps to prevent this wanton slaughter. The
railroads have made the buffalo so accessible as to
present a case not dissimilar.
  
He agreed with Mr. Cox that some features of the bill
would probably be impracticable, and moved to amend
it. He did not believe any bill would entirely
accomplish the purpose, but he desired that such wanton
slaughter should be stopped.

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Said he, “It would have been well both for the
Indians and the white men if an enactment of this
kind had been placed on our statute-books years ago.
\* \* \* I know of no one act that would gratify the red
men more.”
  
Mr. Holman expressed surprise that Mr. Cox should
make any objection to parts of the measure. The
former regarded the bill as “an effort in a
most commendable direction,” and trusted that
it would pass.
  
Mr. Cox said he would not have objected to the bill
but from the fact that it was partial in its provisions.
He wanted a bill that would impose a penalty on every
man, red, white, or black, who may wantonly kill these
buffaloes.
  
Mr. Potter desired to know whether more buffaloes
were slaughtered by the Indians than by white men.
  
Mr. Fort thought the white men were doing the greatest
amount of killing.
  
Mr. Eldridge thought there would be just as much propriety
in killing the fish in our rivers as in destroying
the buffalo in order to compel the Indians to become
civilized.
  
Mr. Conger said: “As a matter of fact,
every man knows the range of the buffalo has grown
more and more confined year after year; that they have
been driven westward before advancing civilization.”
But he opposed the bill!
  
Mr. Hawley, of Connecticut, said: “I am
glad to see this bill. I am in favor of this
law, and hope it will pass.”
  
Mr. Lowe favored the bill, and thought that the buffalo
ought to be protected for proper utility.
  
Mr. Cobb thought they ought to be protected for the
settlers, who depended partly on them for food.
  
Mr. Parker, of Missouri, intimated that the policy
of the Secretary of the Interior was a sound one,
and that the buffaloes ought to be exterminated, to
prevent difficulties in civilizing the Indians.
  
Said Mr. Conger, “I do not think the measure
will tend at all to protect the buffalo.”
  
Mr. McCormick replied: “This bill will
not prevent the killing of buffaloes for any useful
purpose, but only their wanton destruction.”
  
Mr. Kasson said: “I wish to say one word
in support of this bill, because I have had some experience
as to the manner in which these buffaloes are treated
by hunters. The buffalo is a creature of vast
utility, \* \* \*. This animal ought to be protected;
\* \* \*.”
  
The question being taken on the passage of the bill,
there were—­ayes 132, noes not counted.
  
So the bill was passed.
  
On June 23, 1874, this bill (H. R. 921) came
up in the Senate.[74]
  
[Note 74: Congressional Globe, Vol. 2, part 6,
Forty-third Congress, first session.]
  
Mr. Harvey moved, as an amendment, to strike out the
words “who is not an Indian.”
  
Said Mr. Hitchcock, “That will defeat the bill.”
  
Mr. Frelinghuysen said: “That would prevent
the Indians from killing the buffalo on their own
ground. I object to the bill.”

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Mr. Sargent said: “I think we can pass
the bill in the right shape without objection.
Let us take it up. It is a very important one.”
  
Mr. Frelinghuysen withdrew his objection.
  
Mr. Harvey thought it was a very important bill, and
withdrew his amendment.
  
The bill was reported to the Senate, ordered to a
third reading, read the third time, and passed.
It went to President Grant for signature, and expired
in his hands at the adjournment of that session of
Congress.
  
On February 2, 1874, Mr. Fort introduced a bill (H.
R. 1689) to tax buffalo hides; which was referred
to the Committee on Ways and Means.
  
On June 10, 1874, Mr. Dawes, from the Committee on
Ways and Means, reported back the bill adversely,
and moved that it be laid on the table.
  
Mr. Fort asked to have the bill referred to the Committee
of the Whole, and it was so referred.
  
On February 2, 1874, Mr. R. C. McCormick, of Arizona,
introduced in the House a bill (H. R. 1728) restricting
the killing of the bison, or buffalo, on the public
lands; which was referred to the Committee on the
Public Lands, and never heard of more.
  
On January 31, 1876, Mr. Fort introduced a bill (H.
R. 1719) to prevent the useless slaughter of buffaloes
within the Territories of the United States, which
was referred to the Committee on the Territories.[75]
  
[Note 75: Forty-fourth Congress, first session,
vol. 4, part 2, pp. 1237-1241.]
  
The Committee on the Territories reported back the
bill without amendment on February 23, 1876.[76] Its
provisions were in every respect identical with those
of the bill introduced by Mr. Fort in 1874, and which
passed both houses.
  
[Note 76: Forty-fourth Congress first session,
vol. 4, part 1, p. 773.]
  
In support of it Mr. Fort said: “The intention
and object of this bill is to preserve them [the buffaloes]
for the use of the Indians, whose homes are upon the
public domain, and to the frontiersmen, who may properly
use them for food. \* \* \* They have been and are now
being slaughtered in large numbers. \* \* \* Thousands
of these noble brutes are annually slaughtered out
of mere wontonness. \* \* \* This bill, just as it is
now presented, passed the last Congress. It was
not vetoed, but fell, as I understand, merely for
want of time to consider it after having passed both
houses.” He also intimated that the Government
was using a great deal of money for cattle to furnish
the Indians, while the buffalo was being wantonly
destroyed, whereas they might be turned to their good.
  
Mr. Crounse wanted the words “who is not an
Indian” struck out, so as to make the bill general.
He thought Indians were to blame for the wanton destruction.
  
Mr. Fort thought the amendment unnecessary, and stated
that he was informed that the Indians did not destroy
the buffaloes wantonly.
  
Mr. Dunnell thought the bill one of great importance.

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The Clerk read for him a letter from A. G. Brackett,
lieutenant-colonel, Second United States Cavalry,
stationed at Omaha Barracks, in which was a very urgent
request to have Congress interfere to prevent the
wholesale slaughter then going on.
  
Mr. Reagan thought the bill proper and right.
He knew from personal experience how the wanton slaughtering
was going on, and also that the Indians were *not*
the ones who did it.
  
Mr. Townsend, of New York, saw no reason why a white
man should not be allowed to kill a female buffalo
as well as an Indian. He said it would be impracticable
to have a separate law for each.
  
Mr. Maginnis did not agree with him. He thought
the bill ought to pass as it stood.
  
Mr. Throckmorton thought that while the intention
of the bill was a good one, yet it was mischievous
and difficult to enforce, and would also work hardship
to a large portion of our frontier people. He
had several objections. He also thought a cow
buffalo could not be distinguished at a distance.
  
Mr. Hancock, of Texas, thought the bill an impolicy,
and that the sooner the buffalo was exterminated the
better.
  
Mr. Fort replied by asking him why all the game—­deer,
antelope, *etc*.—­was not slaughtered
also. Then he went on to state that to exterminate
the buffalo would be to starve innocent children of
the red man, and to make the latter more wild and
savage than he was already.
  
Mr. Baker, of Indiana, offered the following amendment
as a substitute for the one already offered:
 *Provided*, That any white person who shall employ,
hire, or procure, directly or indirectly, any Indian
to kill any buffalo forbidden to be killed by this
act, shall be deemed guilty of a misdemeanor and punished
in the manner provided in this act.
  
Mr. Fort stated that a certain clause in his bill
covered the object of the amendment.
  
Mr. Jenks offered the following amendment:
  
Strike out in the fourth line of the second section
the word “can” and insert “shall;”
and in the second line of the same section insert the
word “wantonly” before “kill;”
so that the clause will read:
  
“That it shall be in like manner unlawful for
any such person to wantonly kill, wound, or destroy
in the said Territories any greater number of male
buffaloes than are needed for food by such person,
or than shall be used, cured, or preserved for the
food of other persons, or for the market.”
  
Mr. Conger said: “I think the whole bill
is unwise. I think it is a useless measure.”
  
Mr. Hancock said: “I move that the bill
and amendment be laid on the table.”
  
The motion to lay the bill upon the table was defeated,
and the amendment was rejected.
  
Mr. Conger called for a division on the passage of
the bill. The House divided, and there were—­ayes
93, noes 48. He then demanded tellers, and they
reported—­ayes 104, noes 36. So the
bill was passed.

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On February 25, 1876, the bill was reported to the
Senate, and referred to the Committee on Territories,
from whence it never returned.
  
On March 20, 1876, Mr. Fort introduced a bill (H.
R. 2767) to tax buffalo hides; which was referred
to the Committee on Ways and Means, and never heard
of afterward.
  
This was the last move made in Congress in behalf
of the buffalo. The philanthropic friends of
the frontiersman, the Indian, and of the buffalo himself,
despaired of accomplishing the worthy object for which
they had so earnestly and persistently labored, and
finally gave up the fight. At the very time the
effort in behalf of buffalo protection was abandoned
the northern herd still flourished, and might have
been preserved from extirpation.
  
At various times the legislatures of a few of the
Western States and Territories enacted laws vaguely
and feebly intended to provide some sort of protection
to the fast disappearing animals. One of the first
was the game law of Colorado, passed in 1872, which
declared that the killers of game should not leave
any flesh to spoil. The western game laws of
those days amounted to about as much as they do now;
practically nothing at all. I have never been
able to learn of a single instance, save in the Yellowstone
Park, wherein a western hunter was prevented by so
simple and innocuous a thing as a game law from killing
game. Laws were enacted, but they were always
left to enforce themselves. The idea of the frontiersman
(the average, at least) has always been to kill as
much game as possible before some other fellow gets
a chance at it, *and before it is all killed off*!
So he goes at the game, and as a general thing kills
all he can while it lasts, and with it feeds himself
and family, his dogs, and even his hogs, to repletion.
I knew one Montana man north of Miles City who killed
for his own use twenty-six black-tail deer in one
season, and had so much more venison than he could
consume or give away that a great pile of carcasses
lay in his yard until spring and spoiled.
  
During the existence of the buffalo it was declared
by many an impossibility to stop or prevent the slaughter.
Such an accusation of weakness and imbecility on the
part of the General Government is an insult to our
strength and resources. The protection of game
is now and always has been simply a question of money.
A proper code of game laws and a reasonable number
of salaried game-wardens, sworn to enforce them and
punish all offenses against them, would have afforded
the buffalo as much protection as would have been
necessary to his continual existence. To be sure,
many buffaloes would have been killed on the sly in
spite of laws to the contrary, but it was wholesale
slaughter that wrought the extermination, and that
could easily have been prevented. A tax of 50
cents each on buffalo robes would have maintained a
sufficient number of game-wardens to have reasonably
regulated the killing, and maintained for an indefinite
period a bountiful source of supply of food, and also
raiment for both the white man of the plains and the
Indian. By judicious management the buffalo could
have been made to yield an annual revenue equal to
that we now receive from the fur-seals—­$100,000
per year.

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During the two great periods of slaughter—­1870-’75
and 1880-’84—­the principal killing
grounds were as well known as the stock-yards of Chicago.
Had proper laws been enacted, and had either the general
or territorial governments entered with determination
upon the task of restricting the killing of buffaloes
to proper limits, their enforcement would have been,
in the main, as simple and easy as the collection of
taxes. Of course the solitary hunter in a remote
locality would have bowled over his half dozen buffaloes
in secure defiance of the law; but such desultory
killing could not have made much impression on the
great mass for many years. The business-like,
wholesale slaughter, wherein one hunter would openly
kill five thousand buffaloes and market perhaps two
thousand hides, could easily have been stopped forever.
Buffalo hides could not have been dealt in clandestinely,
for many reasons, and had there been no sale for ill-gotten
spoils the still-hunter would have gathered no spoils
to sell. It was an undertaking of considerable
magnitude, and involving a cash outlay of several hundred
dollars to make up an “outfit” of wagons,
horses, arms and ammunition, food, *etc*., for
a trip to “the range” after buffaloes.
It was these wholesale hunters, both in the North
and the South, who exterminated the species, and to
say that all such undertakings could not have been
effectually prevented by law is to accuse our law-makers
and law-officers of imbecility to a degree hitherto
unknown. There is nowhere in this country, nor
in any of the waters adjacent to it, a living species
of any kind which the United States Government can
not fully and perpetually protect from destruction
by human agencies if it chooses to do so. The
destruction of the buffalo was a loss of wealth perhaps
twenty times greater than the sum it would have cost
to conserve it, and this stupendous waste of valuable
food and other products was committed by one class
of the American people and permitted by another with
a prodigality and wastefulness which even in the lowest
savages would be inexcusable.

**V. COMPLETENESS OF THE EXTERMINATION.**

(May 1, 1889.)
  
Although the existence of a few widely-scattered individuals
enables us to say that the bison is not yet absolutely
extinct in a wild state, there is no reason to hope
that a single wild and unprotected individual will
remain alive ten years hence. The nearer the species
approaches to complete extermination, the more eagerly
are the wretched fugitives pursued to the death whenever
found. Western hunters are striving for the honor
(?) of killing the last buffalo, which, it is to be
noted, has already been slain about a score of times
by that number of hunters.

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The buffaloes still alive in a wild state are so very
few, and have been so carefully “marked down”
by hunters, it is possible to make a very close estimate
of the total number remaining. In this enumeration
the small herd in the Yellowstone National Park is
classed with other herds in captivity and under protection,
for the reason that, had it not been for the protection
afforded by the law and the officers of the Park, not
one of these buffaloes would be living to-day.
Were the restrictions of the law removed now, every
one of those animals would be killed within three
months. Their heads alone are worth from $25 to
$50 each to taxidermists, and for this reason every
buffalo is a prize worth the hunter’s winning.
Had it not been for stringent laws, and a rigid enforcement
of them by Captain Harris, the last of the Park buffaloes
would have been shot years ago by Vic. Smith,
the Rea Brothers, and other hunters, of whom there
is always an able contingent around the Park.
  
In the United States the death of a buffalo is now
such an event that it is immediately chronicled by
the Associated Press and telegraphed all over the
country. By reason of this, and from information
already in hand, we are able to arrive at a very fair
understanding of the present condition of the species
in a wild state.
  
In December, 1886, the Smithsonian expedition left
about fifteen buffaloes alive in the bad lands of
the Missouri-Yellowstone divide, at the head of Big
Porcupine Creek. In 1887 three of these were killed
by cowboys, and in 1888 two more, the last death recorded
being that of an old bull killed near Billings.
There are probably eight or ten stragglers still remaining
in that region, hiding in the wildest and most broken
tracts of the bad lands, as far as possible from the
cattle ranches, and where even cowboys seldom go save
on a round-up. From the fact that no other buffaloes,
at least so far as can be learned, have been killed
in Montana during the last two years, I am convinced
that the bunch referred to are the last representatives
of the species remaining in Montana.
  
In the spring of 1886 Mr. B. C. Winston, while on
a hunting trip about 75 miles west of Grand Rapids,
Dakota, saw seven buffaloes—­five adult
animals and two calves; of which he killed one, a large
bull, and caught a calf alive. On September 11,
1888, a solitary bull was killed 3 miles from the
town of Oakes, in Dickey County. There are still
three individuals in the unsettled country lying between
that point and the Missouri, which are undoubtedly
the only wild representatives of the race east of
the Missouri River.
  
On April 28, 1887, Dr. William Stephenson, of the
United States Army, wrote me as follows from Pilot
Butte, about 30 miles north of Rock Springs, Wyoming:
  
“There are undoubtedly buffalo within 50 or
60 miles of here, two having been killed out of a
band of eighteen some ten days since by cowboys, and
another band of four seen near there. I hear from
cattlemen of their being seen every year north and
northeast of here.”

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This band was seen once in 1888. In February,
1889, Hon. Joseph M. Carey, member of Congress from
Wyoming, received a letter informing him that this
band of buffaloes, consisting of twenty-six head, had
been seen grazing in the Red Desert of Wyoming, and
that the Indians were preparing to attack it.
At Judge Carey’s request the Indian Bureau issued
orders which it was hoped would prevent the slaughter.
So, until further developments, we have the pleasure
of recording the presence of twenty-six wild buffaloes
in southern Wyoming.
  
There are no buffaloes whatever in the vicinity of
the Yellowstone Park, either in Wyoming, Montana,
or Idaho, save what wander out of that reservation,
and when any do, they are speedily killed.
  
There is a rumor that there are ten or twelve mountain
buffaloes still on foot in Colorado, in a region called
Lost Park, and, while it lacks confirmation, we gladly
accept it as a fact. In 1888 Mr. C. B. Cory, of
Boston, saw in Denver, Colorado, eight fresh buffalo
skins, which it was said had come from the region
named above. In 1885 there was a herd of about
forty “mountain buffalo” near South Park,
and although some of the number may still survive,
the indications are that the total number of wild
buffaloes in Colorado does not exceed twenty individuals.
  
In Texas a miserable remnant of the great southern
herd still remains in the “Pan-handle country,”
between the two forks of the Canadian River.
In 1886 about two hundred head survived, which number
by the summer of 1887 had been reduced to one hundred,
or less. In the hunting season of 1887-’88
a ranchman named Lee Howard fitted out and led a strong
party into the haunts of the survivors, and killed
fifty-two of them. In May, 1888, Mr. C. J. Jones
again visited this region for the purpose of capturing
buffaloes alive. His party found, from first to
last, thirty-seven buffaloes, of which they captured
eighteen head, eleven adult cows and seven calves;
the greatest feat ever accomplished in buffalo-hunting.
It is highly probable that Mr. Jones and his men saw
about all the buffaloes now living in the Pan-handle
country, and it therefore seems quite certain that
not over twenty-five individuals remain. These
are so few, so remote, and so difficult to reach, it
is to be hoped no one will consider them worth going
after, and that they will be left to take care of
themselves. It is greatly to be regretted that
the State of Texas does not feel disposed to make a
special effort for their protection and preservation.
  
In regard to the existence of wild buffaloes in the
British Possessions, the statements of different authorities
are at variance, by far the larger number holding
the opinion that there are in all the Northwest Territory
only a few almost solitary stragglers. But there
is still good reason for the hope, and also the belief,
that there still remain in Athabasca, between the
Athabasca and Peace Rivers, at least a few hundred
“wood buffalo.” In a very interesting
and well-considered article in the London *Field*
of November 10, 1888, Mr. Miller Christy quotes all
the available positive evidence bearing on this point,
and I gladly avail myself of the opportunity to reproduce
it here:

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“The Hon. Dr. Schulz, in the recent debate on
the Mackenzie River basin, in the Canadian senate,
quoted Senator Hardisty, of Edmonton, of the Hudson’s
Bay Company, to the effect that the wood buffalo still
existed in the region in question. ‘It
was,’ he said, ’difficult to estimate how
many; but probably five or six hundred still remain
in scattered bands.’ There had been no
appreciable difference in their numbers, he thought,
during the last fifteen years, as they could not be
hunted on horseback, on account of the wooded character
of the country, and were, therefore, very little molested.
They are larger than the buffalo of the great plains,
weighing at least 150 pounds more. They are also
coarser haired and straighter horned.
  
“The doctor also quoted Mr. Frank Oliver, of
Edmonton, to the effect that the wood buffalo still
exists in small numbers between the Lower Peace and
Great Slave Rivers, extending westward from the latter
to the Salt River in latitude 60 degrees, and also
between the Peace and Athabasca Rivers. He states
that ’they are larger than the prairie buffalo,
and the fur is darker, but practically they are the
same animal.’ ...Some buffalo meat is brought
in every winter to the Hudson’s Bay Company’s
posts nearest the buffalo ranges.
  
“Dr. Schulz further stated that he had received
the following testimony from Mr. Donald Ross, of Edmonton:
The wood buffalo still exists in the localities named.
About 1870 one was killed as far west on Peace River
as Port Dunvegan. They are quite different from
the prairie buffalo, being nearly double the size,
as they will dress fully 700 pounds.”
  
It will be apparent to most observers, I think, that
Mr. Ross’s statement in regard to the size of
the wood buffalo is a random shot.
  
In a private letter to the writer, under date of October
22, 1887, Mr. Harrison S. Young, of the Hudson’s
Bay Company’s post at Edmonton, writes as follows:
  
“The buffalo are not yet extinct in the Northwest.
There are still some stray ones on the prairies away
to the south of this, but they must be very few.
I am unable to find any one who has personal knowledge
of the killing of one during the last two years, though
I have since the receipt of your letter questioned
a good many half-breeds on the subject. In our
district of Athabasca, along the Salt River, there
are still a few wood buffalo killed every year, but
they are fast diminishing in numbers and are also
becoming very shy.”
  
In his “Manitoba and the Great Northwest”
Prof. John Macoun has this to say regarding the
presence of the wood buffalo in the region referred
to:
  
“The wood buffalo, when I was on the Peace River
in 1875, were confined to the country lying between
the Athabasca and Peace Rivers north of latitude 57°
30’, or chiefly in the Birch Hills. They
were also said to be in some abundance on the Salt
and Hay Rivers, running into the Save River north
of Peace River. The herds thirteen years ago [now
nineteen] were supposed to number about one thousand,
all told. I believe many still exist, as the
Indians of that region eat fish, which are much easier
procured than either buffalo or moose, and the country
is much too difficult for white men.”

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All this evidence, when carefully considered, resolves
itself into simply this and no more: The only
evidence in favor of the existence of any live buffaloes
between the Athabasca and Peace Rivers is in the form
of very old rumors, most of them nearly fifteen years
old; time enough for the Indians to have procured
fire-arms in abundance and killed all those buffaloes
two or three times over.
  
Mr. Miller Christy takes “the mean of the estimates,”
and assumes that there are now about five hundred
and fifty buffaloes in the region named. If we
are to believe in the existence there of any stragglers
his estimate is a fair one, and we will gladly accept
it. The total is therefore as follows:
+-------------------------------------------------+
| *Number of American bison running wild |
| and unprotected on January 1, 1889.* |
+-------------------------------------------------+
|In the Pan-handle of Texas | 25|
|In Colorado | 20|
|In southern Wyoming | 26|
|In the Musselshell country, Montana | 10|
|In western Dakota | 4|
| |---|
| Total number in the United States | 85|
|In Athabasca, Northwest Territory (estimated)|550|
| |---|
| Total in all North America |635|
+-------------------------------------------------+
  
Add to the above the total number already recorded
in captivity (256) and those under Government protection
in the Yellowstone Park (200), and the whole number
of individuals of *Bison americanus* now living
is 1,091.
  
From this time it is probable that many rumors of
the sudden appearance of herds of buffaloes will become
current. Already there have been three or four
that almost deserve special mention. The first
appeared in March, 1887, when various Western newspapers
published a circumstantial account of how a herd of
about three hundred buffaloes swam the Missouri River
about 10 miles above Bismarck, near the town of Painted
Woods, and ran on in a southwesterly direction.
A letter of inquiry, addressed to Mr. S. A. Peterson,
postmaster at Painted Woods, elicited the following
reply:
  
“The whole rumor is false, and without any foundation.
I saw it first in the ——­ newspaper,
where I believe it originated.”
  
In these days of railroads and numberless hunting
parties, there is not the remotest possibility of
there being anywhere in the United States a herd of
a hundred, or even fifty, buffaloes which has escaped
observation. Of the eighty-five head still existing
in a wild state it may safely be predicted that not
even one will remain alive five years hence.
A buffalo is now so great a prize, and by the ignorant
it is considered so great an honor(!) to kill one,
that extraordinary exertions will be made to find
and shoot down without mercy the “last buffalo.”

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There is no possible chance for the race to be perpetuated
in a wild state, and in a few years more hardly a
bone will remain above ground to mark the existence
of the must prolific mammalian species that ever existed,
so far as we know.

**VI.  EFFECTS OF THE EXTERMINATION.**

The buffalo supplied the Indian with food, clothing,
shelter, bedding, saddles, ropes, shields, and innumerable
smaller articles of use and ornament In the United
States a paternal government takes the place of the
buffalo in supplying all these wants of the red man,
and it costs several millions of dollars annually
to accomplish the task.
  
The following are the tribes which depended very largely—­some
almost wholly—­upon the buffalo for the
necessities, and many of the luxuries, of their savage
life until the Government began to support them:
+------------------------------------+
|Sioux |30,561|
|Crow | 3,226|
|Piegan, Blood, and Blackfeet | 2,026|
|Cheyenne | 3,477|
|Gros Ventres | 856|
|Arickaree | 517|
|Mandan | 283|
|Bannack and Shoshone | 2,001|
|Nez Percé | 1,460|
|Assinniboine | 1,688|
|Kiowas and Comanches | 2,756|
|Arapahoes | 1,217|
|Apache | 332|
|Ute | 978|
|Omaha | 1,160|
|Pawnee | 998|
|Winnebago | 1,222|
| |------|
| Total |54,758|
+------------------------------------+
  
This enumeration (from the census of 1886) leaves
entirely out of consideration many thousands of Indians
living in the Indian Territory and other portions
of the Southwest, who drew an annual supply of meat
and robes from the chase of the buffalo, notwithstanding
the fact that their chief dependence was upon agriculture.
  
The Indians of what was once the buffalo country are
not starving and freezing, for the reason that the
United States Government supplies them regularly with
beef and blankets in lieu of buffalo. Does any
one imagine that the Government could not have regulated
the killing of buffaloes, and thus maintained the
supply, for far less money than it now costs to feed
and clothe those 54,758 Indians!
  
How is it with the Indians of the British Possessions
to-day?
  
Prof. John Maconn writes as follows in his “Manitoba
and the Great Northwest,” page 342:
  
“During the last three years [prior to 1883]
the great herds have been kept south of our boundary,
and, as the result of this, our Indians have been
on the verge of starvation. When the hills were
covered with countless thousands [of buffaloes] in
1877, the Blackfeet were dying of starvation in 1879.”

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During the winter of 1886-’87, destitution and
actual starvation prevailed to an alarming extent
among certain tribes of Indians in the Northwest Territory
who once lived bountifully on the buffalo. A
terrible tale of suffering in the Athabasca and Peace
River country has recently (1888) come to the minister
of the interior of the Canadian government, in the
form of a petition signed by the bishop of that diocese,
six clergymen and missionaries, and several justices
of the peace. It sets forth that “owing
to the destruction of game, the Indians, both last
winter and last summer, have been in a state of starvation.
They are now in a complete state of destitution, and
are utterly unable to provide themselves with clothing,
shelter, ammunition, or food for the coming winter.”
The petition declares that on account of starvation,
and consequent cannibalism, a party of twenty-nine
Cree Indians was reduced to three in the winter of
1886.[77] Of the Fort Chippewyan Indians, between
twenty and thirty starved to death last winter, and
the death of many more was hastened by want of food
and by famine diseases. Many other Indians—­Crees,
Beavers, and Chippewyans—­at almost all
points where there are missions or trading posts, would
certainly have starved to death but for the help given
them by the traders and missionaries at those places.
It is now declared by the signers of the memorial
that scores of families, having lost their heads by
starvation, are now perfectly helpless, and during
the coming winter must either starve to death or eat
one another unless help comes. Heart-rending
stories of suffering and cannibalism continue to come
in from what was once the buffalo plains.
  
[Note 77: It was the Cree Indians who used to
practice impounding buffaloes, slaughtering a penful
of two hundred head at a time with most fiendish glee,
and leaving all but the very choicest of the meat to
putrefy.]
  
If ever thoughtless people were punished for their
reckless improvidence, the Indians and half-breeds
of the Northwest Territory are now paying the penalty
for the wasteful slaughter of the buffalo a few short
years ago. The buffalo is his own avenger, to
an extent his remorseless slayers little dreamed he
ever could be.

**VII.  PRESERVATION OF THE SPECIES FROM ABSOLUTE EXTINCTION.**

There is reason to fear that unless the United States
Government takes the matter in hand and makes a special
effort to prevent it, the pure-blood bison will be
lost irretrievably through mixture with domestic breeds
and through in-and-in breeding.
  
The fate of the Yellowstone Park herd is, to say the
least, highly uncertain. A distinguished Senator,
who is deeply interested in legislation for the protection
of the National Park reservation, has declared that
the pressure from railway corporations, which are seeking
a foot-hold in the park, has become so great and so
aggressive that he fears the park will “eventually
be broken up.” In any such event, the destruction
of the herd of park buffaloes would be one of the very
first results. If the park is properly maintained,
however, it is to be hoped that the buffaloes now
in it will remain there and increase indefinitely.

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As yet there are only two captive buffaloes in the
possession of the Government, viz, those in the Department
of Living Animals of the National Museum, presented
by Hon. E. G. Blackford, of New York. The buffaloes
now in the Zoological Gardens of the country are but
few in number, and unless special pains be taken to
prevent it, by means of judicious exchanges, from
time to time, these will rapidly deteriorate in size,
and within a comparatively short time run out entirely,
through continued in-and-in breeding. It is said
that even the wild aurochs in the forests of Lithuania
are decreasing in size and, in number from this cause.
  
With private owners of captive buffaloes, the temptations
to produce cross-breeds will be so great that it is
more than likely the breeding of pure-blood buffaloes
will be neglected. Indeed, unless some stockman
like Mr. C. J. Jones takes particular pains to protect
his full blood buffaloes, and keep the breed absolutely
pure, in twenty years there will not be a pure-blood
animal of that species on any stock farm in this country.
Under existing conditions, the constant tendency of
the numerous domestic forms is to absorb and utterly
obliterate the few wild ones.
  
If we may judge from the examples set as by European
governments, it is clearly the duty of our Government
to act in this matter, and act promptly, with a degree
of liberality and promptness which can not be otherwise
than highly gratifying to every American citizen and
every friend of science throughout the world.
The Fiftieth Congress, at its last session, responded
to the call made upon it, and voted $200,000 for the
establishment of a National Zoological Park in the
District of Columbia on a grand scale. One of
the leading purposes it is destined to serve is the
preservation and breeding in comfortable, and so far
as space is concerned, luxurious captivity of a number
of fine specimens of every species of American quadruped
now threatened with extermination.[78]
  
[Note 78: It is indeed an unbounded satisfaction
to be able to now record the fact that this important
task, in which every American citizen has a personal
interest, is actually to be undertaken. Last year
we could only way it ought to be undertaken. In
its accomplishment, the Government expects the co-operation
of private individuals all over the country in the
form of gifts of desirable living animals, for no
government could afford to purchase all the animals
necessary for a great Zoological Garden, provide for
their wants in a liberal way, and yet give the public
free access to the collection, as is to be given to
the National Zoological Park.]
  
At least eight or ten buffaloes of pure breed should
be secured very soon by the Zoological Park Commission,
by gift if possible, and cared for with special reference
to keeping the breed absolutely pure, and *keeping
the herd from deteriorating and dying out through in-and-in
breeding*.

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The total expense would be trifling in comparison
with the importance of the end to be gained, and in
that way we might, in a small measure, atone for our
neglect of the means which would have protected the
great herds from extinction. In this way, by
proper management, it will be not only possible but
easy to preserve fine living representatives of this
important species for centuries to come.
  
The result of continuing in-breeding is certain extinction.
Its progress may be so slow as to make no impression
upon the mind of a herd-owner, but the end is only
a question of time. The fate of a majority of
the herds of British wild cattle (*Bos urus*)
warn us what to expect with the American bison under
similar circumstances. Of the fourteen herds of
wild cattle which were in existence in England and
Scotland during the early part of the present century,
direct descendants of the wild herds found in Great
Britain, nine have become totally extinct through in
breeding.
  
The five herds remaining are those at Somerford Park,
Blickling Hall, Woodbastwick, Chartley, and Chillingham.

**PART III.—­THE SMITHSONIAN EXPEDITION FOR MUSEUM SPECIMENS.**

**I. THE EXPLORATION.**  
During the first three months of the year 1886 it
was ascertained by the writer, then chief taxidermist
of the National Museum, that the extermination of
the American bison had made most alarming progress.
By extensive correspondence it was learned that the
destruction of all the large herds, both North and
South, was already an accomplished fact. While
it was generally supposed that at least a few thousand
individuals still inhabited the more remote and inaccessible
regions of what once constituted the great northern
buffalo range, it was found that the actual number
remaining in the whole United States was probably less
than three hundred.
  
By some authorities who were consulted it was considered
an impossibility to procure a large series of specimens
anywhere in this country, while others asserted positively
that there were no wild buffaloes south of the British
possessions save those in the Yellowstone National
Park. Canadian authorities asserted with equal
positiveness that none remained in their territory.
  
A careful inventory of the specimens in the collection
of the National Museum revealed the fact that, with
the exception of one mounted female skin, another
unmounted, and one mounted skeleton of a male buffalo,
the Museum was actually without presentable specimens
of this most important and interesting mammal.
  
Besides those mentioned above, the collection contained
only two old, badly mounted, and dilapidated skins,
(one of which had been taken in summer, and therefore
was not representative), an incomplete skeleton, some
fragmentary skulls of no value, and two mounted heads.
Thus it appeared that the Museum was unable to show
a series of specimens, good or bad, or even one presentable
male of good size.

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In view of this alarming state of affairs, coupled
with the already declared extinction of *Bison americanus*,
the Secretary of the Smithsonian Institution, Prof.
Spencer F. Baird, determined to send a party into
the field at once to find wild buffalo, if any were
still living, and in case any were found to collect
a number of specimens. Since it seemed highly
uncertain whether any other institution, or any private
individual, would have the opportunity to collect a
large supply of specimens before it became too late,
it was decided by the Secretary that the Smithsonian
Institution should undertake the task of providing
for the future as liberally as possible. For the
benefit of the smaller scientific museums of the country,
and for others which will come into existence during
the next half century, it was resolved to collect at
all hazards, in case buffalo could be found, between
eighty and one hundred specimens of various kinds,
of which from twenty to thirty should be skins, an
equal number should be complete skeletons, and of
skulls at least fifty.
  
In view of the great scarcity of buffalo and the general
belief that it might be a work of some months to find
any specimens, even if it were possible to find any
at all, it was determined not to risk the success
of the undertaking by delaying it until the regular
autumn hunting season, but to send a party into the
field at once to prosecute a search. It was resolved
to discover at all hazards the whereabouts of any
buffalo that might still remain in this country in
a wild state, and, if possible, to reach them before
the shedding of their winter pelage. It very
soon became apparent, however, that the latter would
prove an utter impossibility.
  
Late in the month of April a letter was received from
Dr. J. C. Merrill, United States Army, dated at Huntley,
Montana, giving information of reports that buffalo
were still to be found in three localities in the
Northwest, viz: on the headwaters of the Powder
River, Wyoming; in Judith Basin, Montana; and on Big
Dry Creek, also in Montana. The reports in regard
to the first two localities proved to be erroneous.
It was ascertained to a reasonable certainty that
there still existed in southwestern Dakota a small
band of six or eight wild buffaloes, while from the
Pan-handle of Texas there came reports of the existence
there, in small scattered hands, of about two hundred
head. The buffalo known to be in Dakota were
far too few in number to justify a long and expensive
search, while those in Texas, on the Canadian River,
were too difficult to reach to make it advisable to
hunt them save as a last resort. It was therefore
decided to investigate the localities named in the
Northwest.
  
Through the courtesy of the Secretary of War, an order
was sent to the officer commanding the Department
of Dakota, requesting him to furnish the party, through
the officers in command at Forts Keogh, Maginnis, and
McKinney, such field transportation, escort, and camp
equipage as might be necessary, and also to sell to
the party such commissary stores as might be required,
at cost price, plus 10 per cent. The Secretary
of the Interior also favored the party with an order,
directing all Indian agents, scouts, and others in
the service of the Department to render assistance
as far as possible when called upon.

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In view of the public interest attaching to the results
of the expedition, the railway transportation of the
party to and from Montana was furnished entirely without
cost to the Smithsonian Institution. For these
valuable courtesies we gratefully acknowledge our obligations
to Mr. Frank Thomson, of the Pennsylvania Railroad;
Mr. Roswell Miller, of the Chicago, Milwaukee and
St. Paul; and Mr. Robert Harris, of the Northern Pacific.
  
Under orders from the Secretary of the Smithsonian
Institution, the writer left Washington on May 6,
accompanied by A. H. Forney, assistant in the department
of taxidermy, and George H. Hedley, of Medina, New
York. It had been decided that Miles City, Montana,
might properly be taken as the first objective point,
and that town was reached on May 9.
  
Diligent inquiry in Miles City and at Fort Keogh,
2 miles distant, revealed the fact that no one knew
of the presence of any wild buffalo anywhere in the
Northwest, save within the protected limits of the
Yellowstone Park. All inquiries elicited the same
reply: “There are no buffalo any more,
and you can’t get any anywhere.” Many
persons who were considered good authority declared
most positively that there was not a live buffalo
in the vicinity of Big Dry Creek, nor anywhere between
the Yellowstone and Missouri Rivers. An army
officer from Fort Maginnis testified to the total
absence of buffalo in the Judith Basin, and ranchmen
from Wyoming asserted that none remained in the Powder
River country.
  
Just at this time it was again reported to us, and
most opportunely confirmed by Mr. Henry E. Phillips,
owner of the =LU=-bar ranch on Little Dry Creek, that
there still remained a chance to find a few buffalo
in the country lying south of the Big Dry. On
the other hand, other persons who seemed to be fully
informed regarding that very region and the animal
life it contained, assured us that not a single buffalo
remained there, and that a search in that direction
would prove fruitless. But the balance of evidence,
however, seemed to lie in favor of the Big Dry country,
and we resolved to hunt through it with all possible
dispatch.
  
On the afternoon of May 13 we crossed the Yellowstone
and started northwest up the trail which leads along
Sunday Creek. Our entire party consisted of the
two assistants already mentioned, a non-commissioned
officer, Sergeant Garone, and four men from the Fifth
Infantry acting as escort; Private Jones, also from
the Fifth Infantry, detailed to act as our cook, and
a teamster. Our conveyance consisted of a six-mule
team, which, like the escort, was ordered out for
twenty days only, and provided accordingly. Before
leaving Miles City we purchased two saddle-horses
for use in hunting, the equipments for which were
furnished by the ordnance department at Fort Keogh.
  
During the first two days’ travel through the
bad lands north of the Yellowstone no mammals were
seen save prairie-dogs and rabbits. On the third
day a few antelope were seen, but none killed.
It is to be borne in mind that this entire region
is absolutely treeless everywhere save along the margins
of the largest streams. Bushes are also entirely
absent, with the exception of sage-brush, and even
that does not occur to any extent on the divides.

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On the third day two young buck antelopes were shot
at the Red Buttes. One had already commenced
to shed his hair, but the other had not quite reached
that point. We prepared the skin of the first
specimen and the skeleton of the other. This
was the only good antelope skin we obtained in the
spring, those of all the other specimens taken being
quite worthless on account of the looseness of the
hair. During the latter part of May, and from
that time on until the long winter hair is completely
shed, it falls off in handfuls at the slightest pressure,
leaving the skin clad only with a thin growth of new,
mouse-colored hair an eighth of an inch long.
  
After reaching Little Dry Creek and hunting through
the country on the west side of it nearly to its confluence
with the Big Dry we turned southwest, and finally
went into permanent camp on Phillips Creek, 8 miles
above the =LU=-bar ranch and 4 miles from the Little
Dry. At that point we were about 80 miles from
Miles City.
  
From information furnished us by Mr. Phillips and
the cowboys in his employ, we were assured that about
thirty-five head of buffalo ranged in the bad lands
between Phillips Creek and the Musselshell River and
south of the Big Dry. This tract of country was
about 40 miles long from east to west by 25 miles
wide, and therefore of about 1,000 square miles in
area. Excepting two temporary cowboy camps it
was totally uninhabited by man, treeless, without
any running streams, save in winter and spring, and
was mostly very hilly and broken.
  
In this desolate and inhospitable country the thirty-five
buffaloes alluded to had been seen, first on Sand
Creek, then at the head of the Big Porcupine, again
near the Musselshell, and latest near the head of
the Little Dry. As these points were all from
15 to 30 miles distant from each other, the difficulty
of finding such a small herd becomes apparent.
  
Although Phillips Creek was really the eastern boundary
of the buffalo country, it was impossible for a six-mule
wagon to proceed beyond it, at least at that point.
Having established a permanent camp, the Government
wagon and its escort returned to Fort Keogh, and we
proceeded to hunt through the country between Sand
Creek and the Little Dry. The absence of nearly
all the cowboys on the spring round-up, which began
May 20, threatened to be a serious drawback to us,
as we greatly needed the services of a man who was
acquainted with the country. We had with us as
a scout and guide a Cheyenne Indian, named Dog, but
it soon became apparent that he knew no more about
the country than we did. Fortunately, however,
we succeeded in occasionally securing the services
of a cowboy, which was of great advantage to us.
  
It was our custom to ride over the country daily,
each day making a circuit through a new locality,
and covering as much ground as it was possible to
ride over in a day. It was also our custom to
take trips of from two to four days in length, during
which we carried our blankets and rations upon our
horses and camped wherever night overtook us, provided
water could be found.

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Our first success consisted in the capture of a buffalo
calf, which from excessive running had become unable
to keep up with its mother, and had been left behind.
The calf was caught alive without any difficulty, and
while two of the members of our party carried it to
camp across a horse, the other two made a vigorous
effort to discover the band of adult animals.
The effort was unsuccessful, for, besides the calf,
no other buffaloes were seen.
  
Ten days after the above event two bull buffaloes
were met with on the Little Dry, 15 miles above the
=LU=-bar ranch, one of which was overtaken and killed,
but the other got safely away. The shedding of
the winter coat was in full progress. On the
head, neck, and shoulders the old hair had been entirely
replaced by the new, although the two coats were so
matted together that the old hair clung in tangled
masses to the other. The old hair was brown and
weather-beaten, but the new, which was from 3 to 6
inches long, had a peculiar bluish-gray appearance.
On the head the new hair was quite black, and contrasted
oddly with the lighter color. On the body and
hind quarters there were large patches of skin which
were perfectly bare, between which lay large patches
of old, woolly, brown hair. This curious condition
gave the animal a very unkempt and “seedy”
appearance, the effect of which was heightened by
the long, shaggy locks of old, weather beaten hair
which clung to the new coat of the neck and shoulders
like tattered signals of distress, ready to be blown
away by the first gust of wind.
  
This specimen was a large one, measuring 5 feet 4
inches in height. Inasmuch as the skin was not
in condition to mount, we took only the skeleton,
entire, and the skin of the head and neck.
  
The capture of the calf and the death of this bull
proved conclusively that there were buffaloes in that
region, and also that they were breeding in comparative
security. The extent of the country they had to
range over made it reasonably certain that their number
would not be diminished to any serious extent by the
cowboys on the spring round-up, although it was absolutely
certain that in a few months the members of that band
would all be killed. The report of the existence
of a herd of thirty-five head was confirmed later
by cowboys, who had actually seen the animals, and
killed two of them merely for sport, as usual.
They saved a few pounds of hump meat, and all the
rest became food for the wolves and foxes.
  
It was therefore resolved to leave the buffaloes entirely
unmolested until autumn, and then, when the robes
would be in the finest condition, return for a hunt
on a liberal scale. Accordingly, it was decided
to return to Washington without delay, and a courier
was dispatched with a request for transportation to
carry our party back to Fort Keogh.
  
While awaiting the arrival of the wagons, a cowboy
in the employ of the Phillips Land and Cattle Company
killed a solitary bull buffalo about 15 miles west
of our camp, near Sand Creek. This animal had
completely shed the hair on his body and hind quarters.
In addition to the preservation of his entire skeleton,
we prepared the skin also, as an example of the condition
of the buffalo immediately after shedding.

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On June 6 the teams from Fort Keogh arrived, and we
immediately returned to Miles City, taking with us
our live buffalo calf, two fresh buffalo skeletons,
three bleached skeletons, seven skulls, one skin entire,
and one head skin, in addition to a miscellaneous
collection of skins and skeletons of smaller mammals
and birds. On reaching Miles City we hastily
packed and shipped our collection, and, taking the
calf with us, returned at once to Washington.

**II.  THE HUNT.**

On September 24 I arrived at Miles City a second time,
fully equipped for a protracted hunt for buffalo;
this time accompanied only by W. Harvey Brown, a student
of the University of Kansas, as field assistant, having
previously engaged three cowboys as guides and hunters—­Irwin
Boyd, James McNaney, and L. S. Russell. Messrs.
Boyd and Russell were in Miles City awaiting my arrival,
and Mr. McNaney joined us in the field a few days
later. Mr. Boyd acted as my foreman during the
entire hunt, a position which he filled to my entire
satisfaction.
  
Thanks to the energy and good-will of the officers
at Fort Keogh, of which Lieutenant-Colonel Cochran
was then in command, our transportation, camp equipage,
and stores were furnished without an hour’s
delay. We purchased two months’ supplies
of commissary stores, a team, and two saddle-horses,
and hired three more horses, a light wagon, and a
set of double harness. Each of the cowboys furnished
one horse; so that in our outfit we had ten head,
a team, and two good saddle-horses for each hunter.
The worst feature of the whole question of subsistence
was the absolute necessity of hauling a supply of grain
from Miles City into the heart of the buffalo country
for our ten horses. For such work as they had
to encounter it was necessary to feed them constantly
and liberally with oats in order to keep them in condition
to do their work. We took with us 2,000 pounds
of oats, and by the beginning of November as much
more had to be hauled up to us.
  
Thirty six hours after our arrival in Miles City our
outfit was complete, and we crossed the Yellowstone
and started up the Sunday Creek trail. We had
from Fort Keogh a six-mule team, an escort of four
men, in charge of Sergeant Bayliss, and an old veteran
of more than twenty years’ service, from the
Fifth Infantry, Private Patrick McCanna, who was detailed
to act as cook and camp-guard for our party during
our stay in the field.
  
On September 29 we reached Tow’s ranch, the
=HV=, on Big Dry Creek (erroneously called Big Timber
Creek on most maps of Montana), at the mouth of Sand
Creek, which here flows into it from the southwest.
This point is said to be 90 miles from Miles City.
Here we received our freight from the six-mule wagon,
loaded it with bleached skeletons and skulls of buffalo,
and started it back to the post. One member of
the escort, Private C. S. West, who was then on two
months’ furlough, elected to join our party
for the hunt, and accordingly remained with us to
its close. Leaving half of our freight stored
at the =HV= ranch, we loaded the remainder upon our
own wagon, and started up Sand Creek.

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[Illustration: SKETCH MAP OF THE HUNT FOR BUFFALO.
MONTANA 1886.]
  
At this point the hunt began. As the wagon and
extra horses proceeded up the Sand Creek trail in
the care of W. Harvey Brown, the three cowboys and
I paired off, and while two hunted through the country
along the south side of the creek, the others took
the north. The whole of the country bordering
Sand Creek, quite up to its source, consists of rugged
hills and ridges, which sometimes rise to considerable
height, cut between by great yawning ravines and hollows,
such as persecuted game loves to seek shelter in.
Inasmuch as the buffalo we were in search of had been
seen hiding in those ravines, it became necessary to
search through them with systematic thoroughness;
a proceeding which was very wearing upon our horses.
Along the south side of Sand Creek, near its source,
the divide between it and Little Dry Creek culminates
in a chain of high, flat-topped buttes, whose summits
bear a scanty growth of stunted pines, which serve
to make them conspicuous landmarks. On some maps
these insignificant little buttes are shown as mountains,
under the name of “Piny Buttes.”
  
It was our intention to go to the head of Sand Creek,
and beyond, in case buffaloes were not found earlier.
Immediately westward of its source there is a lofty
level plateau, about 3 miles square, which, by common
consent, we called the High Divide. It is the
highest ground anywhere between the Big Dry and the
Yellowstone, and is the starting point of streams
that run northward into the Missouri and Big Dry,
eastward into Sand Creek and the Little Dry, southward
into Porcupine Creek and the Yellowstone, and westward
into the Musselshell. On three sides—­north,
east, and south—­it is surrounded by wild
and rugged butte country, and its sides are scored
by intricate systems of great yawning ravines and
hollows, steep-sided and very deep, and bad lands of
the worst description.
  
By the 12th of October the hunt had progressed up
Sand Creek to its source, and westward across the
High Divide to Calf Creek, where we found a hole of
wretchedly bad water and went into permanent camp.
We considered that the spot we selected would serve
us as a key to the promising country that lay on three
sides of it, and our surmise that the buffalo were
in the habit of hiding in the heads of those great
ravines around the High Divide soon proved to be correct.
Our camp at the head of Calf Creek was about 20 miles
east of the Musselshell River, 40 miles south of the
Missouri, and about 135 miles from Miles City, as
the trail ran. Four miles north of us, also on
Calf Creek, was the line camp of the =STV= ranch,
owned by Messrs. J. H. Conrad & Co., and 18 miles
east, near the head of Sand Creek, was the line camp
of the =N=-bar ranch, owned by Mr. Newman. At
each of these camps there were generally from two
to four cowboys. From all these gentlemen we received
the utmost courtesy and hospitality on all occasions,
and all the information in regard to buffalo which
it was in their power to give. On many occasions
they rendered us valuable assistance, which is hereby
gratefully acknowledged.

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We saw no buffalo, nor any signs of any, until October
13. On that day, while L. S. Russell was escorting
our second load of freight across the High Divide,
he discovered a band of seven buffaloes lying in the
head of a deep ravine. He fired upon them, but
killed none, and when they dashed away he gave chase
and followed them 2 or 3 miles. Being mounted
on a tired horse, which was unequal to the demands
of the chase, he was finally distanced by the herd,
which took a straight course and ran due south.
As it was then nearly night, nothing further could
be done that day except to prepare for a vigorous
chase on the morrow. Everything was got in perfect
readiness for an early start, and by daybreak the
following morning the three cowboys and the writer
were mounted on our best horses, and on our way through
the bad lands to take up the trail of the seven buffaloes.
  
Shortly after sunrise we found the trail, not far
from the head of Calf Creek, and followed it due south.
We left the rugged butte region behind us, and entered
a tract of country quite unlike anything we had found
before. It was composed of a succession of rolling
hills and deep hollows, smooth enough on the surface,
to all appearances, but like a desert of sand-hills
to traverse. The dry soil was loose and crumbly,
like loose ashes or scoriæ, and the hoofs of our horses
sank into it half-way to the fetlocks at every step.
But there was another feature which was still worse.
The whole surface of the ground was cracked and seamed
with a perfect net-work of great cracks, into which
our horses stepped every yard or so, and sank down
still farther, with many a tiresome wrench of the
joints. It was terrible ground to go over.
To make it as bad as possible, a thick growth of sage-brush
or else grease-wood was everywhere present for the
horses to struggle through, and when it came to dragging
a loaded wagon across that 12-mile stretch of “bad
grounds” or “gumbo ground,” as it
was called, it was killing work.
  
But in spite of the character of this ground, in one
way it was a benefit to us. Owing to its looseness
on the surface we were able to track the buffaloes
through it with the greatest ease, whereas on any
other ground in that country it would have been almost
impossible. We followed the trail due south for
about 20 miles, which brought us to the head of a
small stream called Taylor Creek. Here the bad
grounds ended, and in the grassy country which lay
beyond, tracking was almost impossible. Just
at noon we rode to a high point, and on scanning the
hills and hollows with the binocular discovered the
buffaloes lying at rest on the level top of a small
butte 2 miles away. The original bunch of seven
had been joined by an equal number.
  
We crept up to within 200 yards of the buffaloes,
which was as close as we could go, fired a volley
at them just as they lay, and did not even kill a
calf! Instantly they sprang up and dashed away
at astonishing speed, heading straight for the sheltering
ravines around the High Divide.

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We had a most exciting and likewise dangerous chase
after the herd through a vast prairie-dog town, honey-combed
with holes just right for a running horse to thrust
a leg in up to the knee and snap it off like a pipe-stem,
and across fearfully wide gullies that either had to
be leaped or fallen into. McNaney killed a fine
old bull and a beautiful two year old, or “spike”
bull, out of this herd, while I managed to kill a
cow and another large old bull, making four for that
day, all told. This herd of fourteen head was
the largest that we saw during the entire hunt.
  
Two days later, when we were on the spot with the
wagon to skin our game and haul in the hides, four
more buffaloes were discovered within 2 miles of us,
and while I worked on one of the large bull skins to
save it from spoiling, the cowboys went after the
buffalo, and by a really brilliant exploit killed
them all. The first one to fall was an old cow,
which was killed at the beginning of the chase, the
next was an old bull, who was brought down about 5
miles from the scene of the first attack, then 2 miles
farther on a yearling calf was killed. The fourth
buffalo, an immense old bull, was chased fully 12 miles
before he was finally brought down.
  
The largest bull fell about 8 miles from our temporary
camp, in the opposite direction from that in which
our permanent camp lay, and at about 3 o’clock
in the afternoon. There not being time enough
in which to skin him completely and reach our rendezvous
before dark, Messrs. McNaney and Boyd dressed the
carcass to preserve the meat, partly skinned the legs,
and came to camp.
  
As early as possible the next morning we drove to
the carcass with the wagon, to prepare both skin and
skeleton and haul them in. When we reached it
we found that during the night a gang of Indians had
robbed us of our hard-earned spoil. They had
stolen the skin and all the eatable meat, broken up
the leg-bones to get at the marrow, and even cut out
the tongue. And to injury the skulking thieves
had added insult. Through laziness they had left
the head unskinned, but on one side of it they had
smeared the hair with red war-paint, the other side
they had daubed with yellow, and around the base of
one horn they had tied a strip of red flannel as a
signal of defiance. Of course they had left for
parts unknown, and we never saw any signs of them afterward.
The gang visited the =LU=-bar ranch a few days later,
so we learned subsequently. It was then composed
of eleven braves(!), who claimed to be Assinniboines,
and were therefore believed to be Piegans, the most
notorious horse and cattle thieves in the Northwest.

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On October 22d Mr. Russell ran down in a fair chase
a fine bull buffalo, and killed him in the rough country
bordering the High Divide on the south. This
was the ninth specimen. On the 26th we made an
other trip with the wagon to the Buffalo Buttes, as,
for the sake of convenience, we had named the group
of buttes near which eight head had already been taken.
While Mr. Brown and I were getting the wagon across
the bad grounds, Messrs. McNaney and Boyd discovered
a solitary bull buffalo feeding in a ravine within
a quarter of a mile of our intended camping place,
and the former stalked him and killed him at long range.
The buffalo had all been attracted to that locality
by some springs which lay between two groups of hills,
and which was the only water within a radius of about
15 miles. In addition to water, the grass around
the Buffalo Buttes was most excellent.
  
During all this time we shot antelope and coyotes
whenever an opportunity offered, and preserved the
skins and skeletons of the finest until we had obtained
a very fine series of both. At this season the
pelts of these animals were in the finest possible
condition, the hair having attained its maximum length
and density, and, being quite new, had lost none of
its brightness of color, either by wear or the action
of the weather. Along Sand Creek and all around
the High Divide antelope were moderately plentiful
(but really scarce in comparison with their former
abundance), so much so that had we been inclined to
slaughter we could have killed a hundred head or more,
instead of the twenty that we shot as specimens and
for their flesh. We have it to say that from first
to last not an antelope was killed which was not made
use of to the fullest extent.
  
On the 31st of October, Mr. Boyd and I discovered
a buffalo cow and yearling calf in the ravines north
of the High Divide, within 3 miles of our camp, and
killed them both. The next day Private West arrived
with a six mule team from Fort Keogh, in charge of
Corporal Clafer and three men. This wagon brought
us another 2,000 pounds of oats and various commissary
stores. When it started back, on November 3, we
sent by it all the skins and skeletons of buffalo,
antelope, *etc*., which we had collected up to
that date, which made a heavy load for the six mules.
On this same day Mr. McNaney killed two young cow
buffaloes in the bad lands south of the High Divide,
which brought our total number up to fourteen.
  
On the night of the 3d the weather turned very cold,
and on the day following we experienced our first
snow-storm. By that time the water in the hole,
which up to that time had supplied our camp, became
so thick with mud and filth that it was unendurable;
and having discovered a fine pool of pure water in
the bottom of a little cañon on the southern slope
of the High Divide we moved to it forthwith. It
was really the upper spring of the main fork of the
Big Porcupine, and a finer situation for a camp does

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not exist in that whole region. The spot which
nature made for us was sheltered on all sides by the
high walls of the cañon, within easy reach of an inexhaustible
supply of good water, and also within reach of a fair
supply of dry fire-wood, which we found half a mile
below. This became our last permanent camp, and
its advantages made up for the barrenness and discomfort
of our camp on Calf Creek. Immediately south
of us, and 2 miles distant there rose a lofty conical
butte about 600 feet high, which forms a very conspicuous
landmark from the south. We were told that it
was visible from 40 miles down the Porcupine.
Strange to say, this valuable landmark was without
a name, so far as we could learn; so, for our own
convenience, we christened it Smithsonian Butte.
  
The two buffalo cows that Mr. McNaney killed just
before we moved our camp seemed to be the last in
the country, for during the following week we scouted
for 15 miles in three directions, north, east, and
south, without finding as much as a hoof-print.
At last we decided to go away and give that country
absolute quiet for a week, in the hope that some more
buffalo would come into it. Leaving McCanna and
West to take care of the camp, we loaded a small assortment
of general equipage into the wagon and pulled about
25 miles due west to the Musselshell River.
  
We found a fine stream of clear water, flowing over
sand and pebbles, with heavy cottonwood timber and
thick copses of willow along its banks, which afforded
cover for white-tailed deer. In the rugged brakes,
which led from the level river bottom into a labyrinth
of ravines and gullies, ridges and hog-backs, up to
the level of the high plateau above, we found a scanty
growth of stunted cedars and pines, which once sheltered
great numbers of mule deer, elk, and bear. Now,
however, few remain, and these are very hard to find.
Even when found, the deer are nearly always young.
Although we killed five mule deer and five white-tails,
we did not kill even one fine buck, and the only one
we saw on the whole trip was a long distance off.
We saw fresh tracks of elk, and also grizzly bear,
but our most vigorous efforts to discover the animals
themselves always ended in disappointment. The
many bleaching skulls and antlers of elk and deer,
which we found everywhere we went, afforded proof of
what that country had been as a home for wild animals
only a few years ago. We were not a little surprised
at finding the fleshless carcasses of three head of
cattle that had been killed and eaten by bears within
a few months.
  
In addition to ten deer, we shot three wild geese,
seven sharp-tailed grouse, eleven sage grouse, nine
Bohemian waxwings, and a magpie, for their skeletons.
We made one trip of several miles up the Musselshell,
and another due west, almost to the Bull Mountains,
but no signs of buffalo were found. The weather
at this time was quite cold, the thermometer registering
6 degrees below zero; but, in spite of the fact that
we were without shelter and had to bivouac in the open,
we were, generally speaking, quite comfortable.

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Having found no buffalo by the 17th, we felt convinced
that we ought to return to our permanent camp, and
did so on that day. Having brought back nearly
half a wagon-load of specimens in the flesh or half
skinned, it was absolutely necessary that I should
remain at camp all the next day. While I did
so, Messrs. McNaney and Boyd rode over to the Buffalo
Buttes, found four fine old buffalo cows, and, after
a hard chase, killed them all.
  
Under the circumstances, this was the most brilliant
piece of work of the entire hunt. As the four
cows dashed past the hunters at the Buffalo Buttes,
heading for the High Divide, fully 20 miles distant,
McNaney killed one cow, and two others went off wounded.
Of course the cowboys gave chase. About 12 miles
from the starting-point one of the wounded cows left
her companions, was headed off by Boyd, and killed.
About 6 miles beyond that one, McNaney overhauled
the third cow and killed her, but the fourth one got
away for a short time. While McNaney skinned the
third cow and dressed the carcass to preserve the meat,
Boyd took their now thoroughly exhausted horses to
camp and procured fresh mounts. On returning
to McNaney they set out in pursuit of the fourth cow,
chased her across the High Divide, within a mile or
so of our camp, and into the ravines on the northern
slope, where she was killed. She met her death
nearly if not quite 25 miles from the spot where the
first one fell.
  
The death of these four cows brought our number of
buffaloes up to eighteen, and made us think about
the possibilities of getting thirty. As we were
proceeding to the Buffalo Buttes on the day after the
“kill” to gather in the spoil, Mr. Brown
and I taking charge of the wagon, Messrs. McNaney
and Boyd went ahead in order to hunt. When within
about 5 miles of the Buttes we came unexpectedly upon
our companions, down in a hollow, busily engaged in
skinning another old cow, which they had discovered
traveling across the bad grounds, waylaid, and killed.
  
We camped that night on our old ground at the Buffalo
Buttes, and although we all desired to remain a day
or two and hunt for more buffalo, the peculiar appearance
of the sky in the northwest, and the condition of
the atmosphere, warned us that a change of weather
was imminent. Accordingly, the following morning
we decided without hesitation that it was best to
get back to camp that day, and it soon proved very
fortunate for us that we so decided.
  
Feeling that by reason of my work on the specimens
I had been deprived of a fair share of the chase,
I arranged for Mr. Boyd to accompany the wagon on
the return trip, that I might hunt through the bad
lands west of the Buffalo Buttes, which I felt must
contain some buffalo. Mr. Russell went northeast
and Mr. McNaney accompanied me. About 4 miles
from our late camp we came suddenly upon a fine old
solitary bull, feeding in a hollow between two high
and precipitous ridges. After a short but sharp

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chase I succeeded in getting a fair shot at him, and
killed him with a ball which broke his left humerus
and passed into his lungs. He was the only large
bull killed on the entire trip by a single shot.
He proved to be a very fine specimen, measuring 5 feet
6 inches in height at the shoulders. The wagon
was overtaken and called back to get the skin, and
while it was coming I took a complete series of measurements
and sketches of him as he lay.
  
Although we removed the skin very quickly, and lost
no time in again starting the wagon to our permanent
camp, the delay occasioned by the death of our twentieth
buffalo,—­which occurred on November 20,
precisely two months from the date of our leaving Washington
to collect twenty buffalo, it possible,—­caused
us all to be caught in a snow-storm, which burst upon
us from the northwest. The wagon had to be abandoned
about 12 miles from camp in the bad lands. Mr.
Brown packed the bedding on one of the horses and
rode the other, he and Boyd reaching camp about 9
o’clock that night in a blinding snow-storm.
Of coarse the skins in the wagon were treated with
preservatives and covered up. It proved to be
over a week that the wagon and its load had to remain
thus abandoned before it was possible to get to it
and bring it to camp, and even then the task was one
of great difficulty. In this connection I can
not refrain from recording the fact that the services
rendered by Mr. W. Harvey Brown on all such trying
occasions as the above were invaluable. He displayed
the utmost zeal and intelligence, not only in the
more agreeable kinds of work and sport incident to
the hunt, but also in the disagreeable drudgery, such
as team-driving and working on half-frozen specimens
in bitter cold weather.
  
The storm which set in on the 20th soon developed
into a regular blizzard. A fierce and bitter
cold wind swept down from the northwest, driving the
snow before it in blinding gusts. Had our camp
been poorly sheltered we would have suffered, but
at it was we were fairly comfortable.
  
Having thus completed our task (of getting twenty
buffaloes), we were anxious to get out of that fearful
country before we should get caught in serious difficulties
with the weather, and it was arranged that Private
C. S. West should ride to Fort Keogh as soon as possible,
with a request for transportation. By the third
day, November 23, the storm had abated sufficiently
that Private West declared his willingness to start.
It was a little risky, but as he was to make only 10
miles the first day and stop at the =N=-bar camp on
Sand Creek, it was thought safe to let him go.
He dressed himself warmly, took my revolver, in order
not to be hampered with a rifle, and set out.
  
The next day was clear and fine, and we remarked it
as an assurance of Mr. West’s safety during
his ride from Sand Creek to the =LU=-bar ranch, his
second stopping-place. The distance was about
25 miles, through bad lands all the way, and it was
the only portion of the route which caused me anxiety
for our courier’s safety. The snow on the
levels was less than 6 inches deep, the most of it
having been blown into drifts and hollows; but although
the coulées were all filled level to the top, our
courier was a man of experience and would know how
to avoid them.

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The 25th day of November was the most severe day of
the storm, the mercury in our sheltered cañon sinking
to -16 degrees. We had hoped to kill at least
five more buffaloes by the time Private West should
arrive with the wagons; but when at the end of a week
the storm had spent itself, the snow was so deep that
hunting was totally impossible save in the vicinity
of camp, where there was nothing to kill. We expected
the wagons by the 3d of December, but they did not
come that day nor within the next three. By the
6th the snow had melted off sufficiently that a buffalo
hunt was once more possible, and Mr. McNaney and I
decided to make a final trip to the Buffalo Buttes.
The state of the ground made it impossible for us
to go there and return the same day, so we took a
pack-horse and arranged to camp out.
  
When a little over half-way to our old rendezvous
we came upon three buffaloes in the bad grounds, one
of which was an enormous old bull, the next largest
was an adult cow, and the third a two-year-old heifer.
Mr. McNaney promptly knocked down the old cow, while
I devoted my attention to the bull; but she presently
got up and made off unnoticed at the precise moment
Mr. McNaney was absorbed in watching my efforts to
bring down the old bull. After a short chase
my horse carried me alongside my buffalo, and as he
turned toward me I gave him a shot through the shoulder,
breaking the fore leg and bringing him promptly to
the ground. I then turned immediately to pursue
the young cow, but by that time she had got on the
farther side of a deep gully which was filled with
snow, and by the time I got my horse safely across
she had distanced me. I then rode back to the
old bull. When he saw me coming he got upon his
feet and ran a short distance, but was easily overtaken.
He then stood at bay, and halting within 30 yards
of him I enjoyed the rare opportunity of studying
a live bull buffalo of the largest size on foot on
his native heath. I even made an outline sketch
of him in my note-book. Having studied his form
and outlines as much as was really necessary, I gave
him a final shot through the lungs, which soon ended
his career.
  
This was a truly magnificent specimen in every respect.
He was a “stub-horn” bull, about eleven
years old, much larger every way than any of the others
we collected. His height at the shoulder was 5
feet 8 inches perpendicular, or 2 inches more than
the next largest of our collection. His hair
was in remarkably fine condition, being long, fine,
thick, and well colored. The hair in his frontlet
is 16 inches in length, and the thick coat of shaggy,
straw-colored tufts which covered his neck and shoulders
measured 4 inches. His girth behind the fore leg
was 8 feet 4 inches, and his weight was estimated at
1,600 pounds.
  
[Illustration: TROPHIES OF THE HUNT. Mounted
by the author in the U. S. National Museum. Reproduced
from the *Cosmopolitan Magazine*, by permission
of the publishers.]

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I was delighted with our remarkably good fortune in
securing such a prize, for, owing to the rapidity
with which the large buffaloes are being found and
killed off these days, I had not hoped to capture a
really old individual. Nearly every adult bull
we took carried old bullets in his body, and from
this one we took four of various sizes that had been
fired into him on various occasions. One was found
sticking fast in one of the lumbar vertebræ.[79]
  
[Note 79: This specimen is now the commanding
figure of the group of buffalo which has recently
been placed on exhibition in the Museum.]
  
After a chase of several miles Mr. McNaney finally
overhauled his cow and killed her, which brought the
number of buffaloes taken on the fall hunt up to twenty-two.
We spent the night at the Buffalo Buttes and returned
to camp the next day. Neither on that day nor
the one following did the wagons arrive, and on the
evening of the 8th we learned from the cowboys of
the =N=-bar camp on Sand Creek that our courier, Private
West, had not been seen or heard from since he left
their camp on November 24, and evidently had got lost
and frozen to death in the bad lands.
  
The next day we started out to search for Private
West, or news of him, and spent the night with Messrs.
Brodhurst and Andrews, at their camp on Sand Creek.
On the 10th, Mr. McNaney and I hunted through the bad
lands over the course our courier should have taken,
while Messrs. Russell and Brodhurst looked through
the country around the head of the Little Dry.
When McNaney and I reached the =LU=-bar ranch that
night we were greatly rejoiced at finding that West
was alive, although badly frost-bitten, and in Fort
Keogh.
  
It appears that instead of riding due east to the
=LU=-bar ranch, he lost his way in the bad lands,
where the buttes all look alike when covered with
snow, and rode southwest. It is at all times an
easy matter for even a cowboy to get lost in Montana
if the country is new to him, and when there is snow
on the ground the difficulty of finding one’s
way is increased tenfold. There is not only the
danger of losing one’s way, but the still greater
danger of getting ingulfed in a deep coulée full of
loose snow, which may easily cause both horse and rider
to perish miserably. Even the most experienced
riders sometimes ride into coulées which are level
full of snow and hidden from sight.
  
Private West’s experience was a terrible one,
and also a wonderful case of self-preservation.
It shows what a man with a cool head and plenty of
grit can go through and live. When he left us
he wore two undershirts, a heavy blanket shirt, a
soldier’s blouse and overcoat, two pairs of
drawers, a pair of soldier’s woolen trousers,
and a pair of overalls. On his feet he wore three
pairs of socks, a pair of *low shoes* with canvas
leggins, and he started with his feet tied up in burlaps.
His head and hands were also well protected.
He carried a 38-caliber revolver, but, by a great

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oversight, only six matches. When he left the
=N=-bar camp, instead of going due east toward the
=LU=-bar ranch, he swung around and went southwest,
clear around the head of the Little Dry, and finally
struck the Porcupine south of our camp. The first
night out he made a fire with sage-brush, and kept
it going all night. The second night he also
had a fire, but it took his last match to make it.
During the first three days he had no food, but on
the fourth he shot a sage-cock with his revolver,
and ate it raw. This effort, however, cost him
his last cartridge. Through hard work and lack
of food his pony presently gave out, and necessitated
long and frequent stops for rest. West’s
feet threatened to freeze, and he cut off the skirts
of his overcoat to wrap them with, in place of the
gunny sacking, that had been worn to rags. Being
afraid to go to sleep at night, he slept by snatches
in the warmest part of the day, while resting his
horse.
  
On the 5th day he began to despair of succor, although
he still toiled southward through the bad lands toward
the Yellowstone, where people lived. On the envelopes
which contained my letters he kept a diary of his
wanderings, which could tell his story when the cowboys
would find his body on the spring round-up.
  
On the afternoon of the sixth day he found a trail
and followed it until nearly night, when he came to
Cree’s sheep ranch, and found the solitary ranchman
at home. The warm-hearted frontiersman gave the
starving wanderers, man and horse, such a welcome
as they stood in need of. West solemnly declares
that in twenty-four hours he ate a whole sheep.
After two or three days of rest and feeding both horse
and rider were able to go on, and in course of time
reached Fort Keogh.
  
Without the loss of a single day Colonel Gibson started
three teams and an escort up to us, and notwithstanding
his terrible experience, West had the pluck to accompany
them as guide. His arrival among us once more
was like the dead coming to life again. The train
reached our camp on the 13th, and on the 15th we pulled
out for Miles City, loaded to the wagon-bows with
specimens, forage, and camp plunder.
  
From our camp down to the =HV= ranch, at the mouth
of Sand Creek, the trail was in a terrible condition.
But, thanks to the skill and judgment of the train-master,
Mr. Ed. Haskins, and his two drivers, who also knew
their business well, we got safely and in good time
over the dangerous part of our road. Whenever
our own tired and overloaded team got stuck in the
mud, or gave out, there was always a pair of mules
ready to hitch on and help us out. As a train-master,
Mr. Haskins was a perfect model, skillful, pushing,
good-tempered, and very obliging.

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From the =HV= ranch to Miles City the trail was in
fine condition, and we went in as rapidly as possible,
fearing to be caught in the snow-storm which threatened
us all the way in. We reached Miles City on December
20, with our collection complete and in fine condition,
and the next day a snow-storm set in which lasted
until the 25th, and resulted in over a foot of snow.
The ice running in the Yellowstone stopped all the
ferry-boats, and it was with good reason that we congratulated
ourselves on the successful termination of our hunt
at that particular time. Without loss of time
Mr. Brown and I packed our collection, which tilled
twenty-one large cases, turned in our equipage at Fort
Keogh, sold our horses, and started on our homeward
journey. In due course of time the collection
reached the Museum in good condition, and a series
of the best specimens it contains has already been
mounted.
  
At this point it is proper to acknowledge our great
indebtedness to the Secretary of War for the timely
co-operation of the War Department, which rendered
the expedition possible. Our thanks are due to
the officers who were successively in command at Fort
Keogh during our work, Col. John D. Wilkins,
Col. George M. Gibson, and Lieut. Col.
M. A. Cochran, and their various staff officers; particularly
Lieut. C. B. Thompson, quartermaster, and Lieut.
H. K. Bailey, adjutant. It is due these officers
to state that everything we asked for was cheerfully
granted with a degree of promptness which contributed
very greatly to the success of the hunt, and lightened
its labors very materially.
  
I have already acknowledged our indebtedness to the
officers of the Pennsylvania; the Chicago, Milwaukee
and St. Paul; and Northern Pacific railways for the
courtesies so liberally extended in our emergency.
I take pleasure in adding that all the officers and
employés of the Northern Pacific Railway with whom
we had any relations, particularly Mr. C. S. Fee,
general passenger and ticket agent, treated our party
with the utmost kindness and liberality throughout
the trip. We are in like manner indebted to the
officers of the Chicago, Milwaukee and St. Paul Railway
for valuable privileges granted with the utmost cordiality.
  
Our thanks are also due to Dr. J. C. Merrill, and
to Mr. Henry R. Phillips, of the Phillips Land and
Cattle Company, on Little Dry Creek, for valuable
information at a critical moment, and to the latter
for hospitality and assistance in various ways, at
times when both were keenly appreciated.
  
Counting the specimens taken in the spring, our total
catch of buffalo amounted to twenty-five head, and
constituted as complete and fine a series as could
be wished for. I am inclined to believe that in
size and general quality of pelage the adult bull
and cow selected and mounted for our Museum group
are not to be surpassed, even if they are ever equaled,
by others of their kind.
  
The different ages and sexes were thus represented
in our collection: 10 old bulls, 1 young bull,
7 old cows, 4 young cows, 2 yearling calves, 1 three-months
calf[80]; total, 25 specimens.

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[Note 80: Caught alive, but died in captivity
July 26, 1886, and now in the mounted group.]
  
Our total collection of specimens of *Bison americanus*,
including everything taken, contained the following:
24 fresh skins, 1 head skin, 8 fresh skeletons, 8
dry skeletons, 51 dry skulls, 2 foetal young; total,
94 specimens.
  
Our collection as a whole also included a fine series
of skins and skeletons of antelope, deer of two species,
coyotes, jack rabbits, sage grouse (of which we prepared
twenty-four rough skeletons for the Department of
Comparative Anatomy), sharp tailed grouse, and specimens
of all the other species of birds and small mammals
to be found in that region at that season. From
this *matériel* we now have on exhibition besides
the group of buffaloes, a family group of antelope,
another of coyotes, and another of prairie dogs, all
with natural surroundings.

**III.  THE MOUNTED GROUP IN THE NATIONAL MUSEUM.**

The result of the Smithsonian expedition for bison
which appeals most strongly to the general public
is the huge group of six choice specimens of both
sexes and all ages, mounted with natural surroundings,
and displayed in a superb mahogany case. The
dimensions of the group are as follows: Length,
16 feet; width, 12 feet, and height, 10 feet.
The subjoined illustration is a very fair representation
of the principal one of its four sides, and the following
admirable description (by Mr. Harry P. Godwin), from
the Washington *Star* of March 10, 1888, is both
graphic and accurate:
  
A SCENE FROM MONTANA—­SIX OF MR. HORNADAY’S
BUFFALOES FORM A PICTURESQUE GROUP—­A BIT
OF THE WILD WEST REPRODUCED AT THE NATIONAL MUSEUM—­SOMETHING
NOVEL IN THE WAY OF TAXIDERMY—­REAL BUFFALO-GRASS,
REAL MONTANA DIRT, AND REAL BUFFALOES.
  
A little bit of Montana—­a small square
patch from the wildest part of the wild West—­has
been transferred to the National Museum. It is
so little that Montana will never miss it, but enough
to enable one who has the faintest glimmer of imagination
to see it all for himself—­the hummocky
prairie, the buffalo-grass, the sage-brush, and the
buffalo. It is as though a little group of buffalo
that have come to drink at a pool had been suddenly
struck motionless by some magic spell, each in a natural
attitude, and then the section of prairie, pool, buffalo,
and all had been carefully cut out and brought to
the National Museum. All this is in a huge glass
case, the largest ever made for the Museum. This
case and the space about it, at the south end of the
south hall, has been inclosed by high screens for
many days while the taxidermist and his assistants
have been at work. The finishing touches were
put on to-day, and the screens will be removed Monday,
exposing to view what is regarded as a triumph of
the taxidermist’s art. The group, with its
accessories, has been prepared so as to tell in an
attractive way to the general visitor to the Museum
the story of the buffalo, but care has been taken
at the same time to secure an accuracy of detail that
will satisfy the critical scrutiny of the most technical
naturalist.

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THE ACCESSORIES.
  
The pool of water is a typical alkaline water-hole,
such as are found on the great northern range of bison,
and are resorted to for water by wild animals in the
fall when the small streams are dry. The pool
is in a depression in the dry bed of a coulée or small
creek. A little mound that rises beside the creek
has been partially washed away by the water, leaving
a crumbling bank, which shows the strata of the earth,
a very thin layer of vegetable soil, beneath a stratum
of grayish earth, and a layer of gravel, from which
protrude a fossil bone or two. The whole bank
shows the marks of erosion by water. Near by the
pool a small section of the bank has fallen.
A buffalo trail passes by the pool in front.
This is a narrow path, well beaten down, depressed,
and bare of grass. Such paths were made by herds
of bison all over their pasture region as they traveled
down water-courses, in single file, searching for
water. In the grass some distance from the pool
lie the bleaching skulls of two buffalo who have fallen
victims to hunters who have cruelly lain in wait to
get a shot at the animals as they come to drink.
Such relics, strewn all over the plain, tell the story
of the extermination of the American bison. About
the pool and the sloping mound grow the low buffalo-grass,
tufts of tall bunch-grass and sage-brush, and a species
of prickly pear. The pool is clear and tranquil.
About its edges is a white deposit of alkali.
These are the scenic accessories of the buffalo group,
but they have an interest almost equal to that of
the buffaloes themselves, for they form really and
literally a genuine bit of the West. The homesick
Montana cowboy, far from his wild haunts, can here
gaze upon his native sod again; for the sod, the earth
that forms the face of the bank, the sage-brush, and
all were brought from Montana—­all except
the pool. The pool is a glassy delusion, and
very perfect in its way. One sees a plant growing
beneath the water, and in the soft, oozy bottom, near
the edge, are the deep prints made by the fore feet
of a big buffalo bull. About the soft, moist
earth around the pool, and in the buffalo trail are
the foot-tracks of the buffalo that have tramped around
the pool, some of those nearest the edge having filled
with water.

**THE SIX BUFFALOES.**

The group comprises six buffaloes. In front of
the pool, as if just going to drink, is the huge buffalo
bull, the giant of his race, the last one that was
secured by the Smithsonian party in 1888, and the one
that is believed to be the largest specimen of which
there is authentic record. Near by is a cow eight
years old, a creature that would be considered of
great dimensions in any other company than that of
the big bull. Near the cow is a suckling calf,
four months old. Upon the top of the mound is
a “spike” bull, two and a half years old;
descending the mound away from the pool is a young

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cow three years old, on one side, and on the other
a male calf a year and a half old. All the members
of the group are disposed in natural attitudes.
The young cow is snuffing at a bunch of tall grass;
the old bull and cow are turning their heads in the
same direction apparently, as if alarmed by something
approaching; the others, having slaked their thirst,
appear to be moving contentedly away. The four
months’ old calf was captured alive and brought
to this city. It lived for some days in the Smithsonian
grounds, but pined for its prairie home, and finally
died. It is around the great bull that the romance
and main interest of the group centers.
  
\* \* \* \*
\*
  
It seemed as if Providence had ordained that this
splendid animal, perfect in limb, noble in size, should
be saved to serve as a monument to the greatness of
his race, that once roamed the prairies in myriads.
Bullets found in his body showed that he had been chased
and hunted before, but fate preserved him for the
immortality of a Museum exhibit. His vertical
height at the shoulders is 5 feet 8 inches. The
thick hair adds enough to his height to make it full
6 feet. The length of his head and body is 9
feet 2 inches, his girth 8 feet 4 inches and his weight
is, or was, about 1,600 pounds.

**THE TAXIDERMIST’S OBJECT LESSONS.**

This group, with its accessories, is, in point of
size, about the biggest thing ever attempted by a
taxidermist. It was mounted by Mr. Hornaday,
assisted by Messrs. J. Palmer and A. H. Forney.
It represents a new departure in mounting specimens
for museums. Generally such specimens have been
mounted singly, upon a flat surface. The American
mammals, collected by Mr. Hornaday, will be mounted
in a manner that will make each piece or group an
object lesson, telling something of the history and
the habits of the animal. The first group produced
as one of the results of the Montana hunt comprised
three coyotes. Two of them are struggling, and
one might almost say snarling, over a bone. They
do not stand on a painted board, but on a little patch
of soil. Two other groups designed by Mr. Hornaday,
and executed by Mr. William Palmer, are about to be
placed in the Museum. One of these represents
a family of prairie-dogs. They are disposed about
a prairie-dog mound. One sits on its haunches
eating; others are running about. Across the mouth
of the burrow, just ready to disappear into it, is
another one, startled for the moment by the sudden
appearance of a little burrowing owl that has alighted
on one side of the burrow. The owl and the dog
are good friends and live together in the same burrow,
but there appears to be strained relations between
the two for the moment.
  
MAP ILLUSTRATING THE EXTERMINATION OF THE AMERICAN
BISON.   
Prepared by W. T. Hornaday.

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+------|--------------|---------------|--------------+
|Total | 459,453 | 2,250,400 | 10,793,350 |
+----------------------------------------------------+

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|Depth of flank | 1 | 7 |
|Girth behind fore leg | 6 | 10 |
|From base of horns around end of nose | 3 | |
|Length of tail vertebræ | 1 | |
+-----------------------------------------------------------  
----+

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|Length of tail vertebræ | 1 | .. |
+-----------------------------------------------------------  
-+